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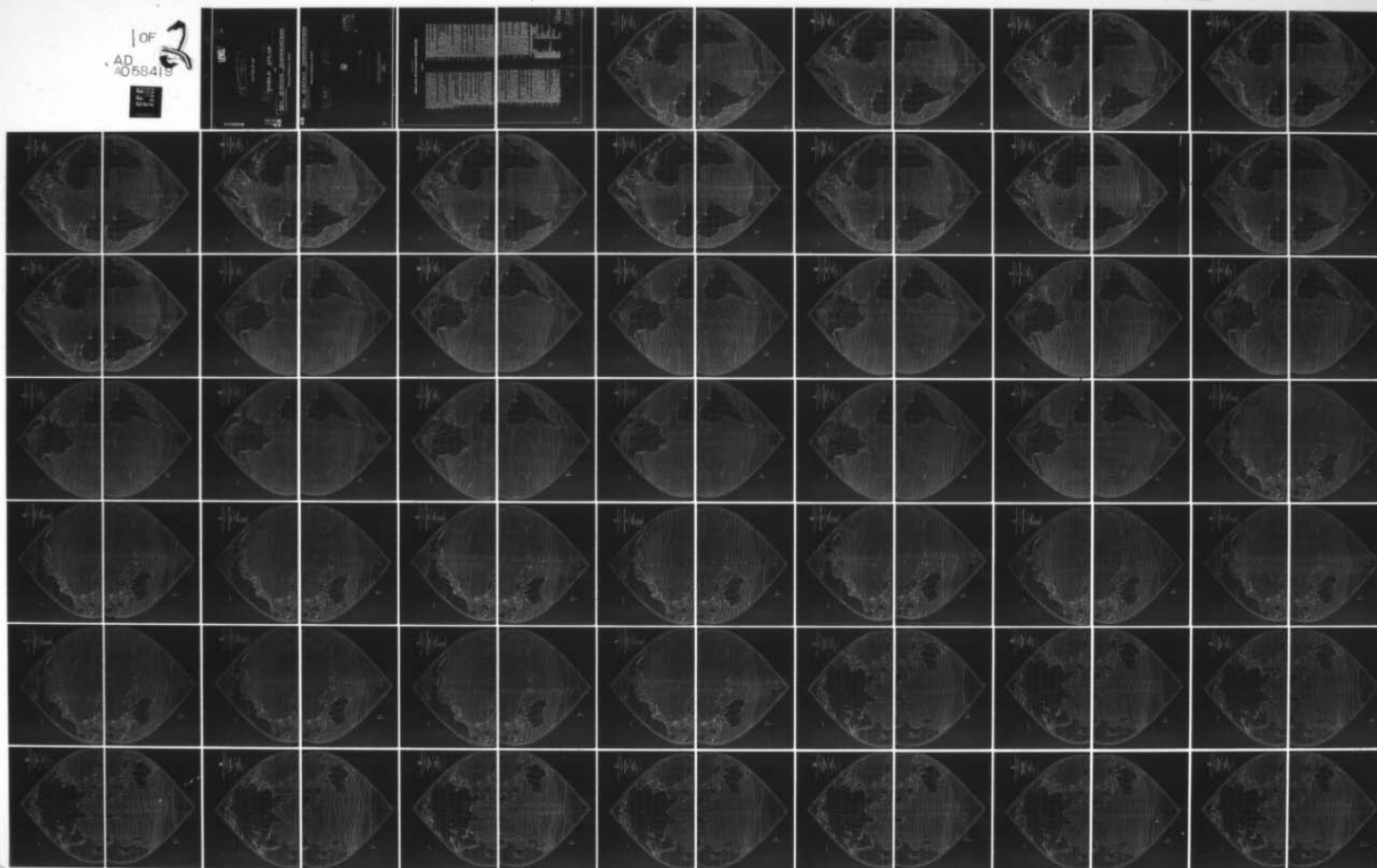
WORLD ATLAS OF SEA SURFACE TEMPERATURES, SECOND EDITION-1944.(U)

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WORLD ATLAS

OF

SEA SURFACE TEMPERATURES

Second Edition—1944.

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# SEA SURFACE TEMPERATURES

Second Edition—1944.

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WASHINGTON  
1973 (Reprint)

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# WORLD ATLAS OF SEA SURFACE TEMPERATURES

## PREFACE

This world atlas of sea surface temperatures was prepared by the Scripps Institution of Oceanography, La Jolla, Calif., from all sea surface temperature information collected by the U.S. Naval Oceanographic Office, together with all available data from other sources, with special reference to regions of few observations. It is believed that this compilation represents the most accurate pattern of sea surface temperatures of the world yet prepared.

Isotherms are shown for intervals of 5°F. except that in regions of small horizontal temperature gradients 2.5° isotherms have been entered. A closer spacing of these lines would have caused overcrowding and given a false idea of the reliability of the patterns.

Information on ice limits is also shown whenever possible.

In the preparation of this atlas, besides utilizing the millions of correlated individual observations from the files of the U.S. Naval Oceanographic Office, information was also obtained from the following sources:

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3. Böhnecke, G. Temperatur, Salzgehalt und Dichte an der Oberfläche des Atlantischen Ozeans. Wiss. ergeb. Deutsch. Atlan. exped. "Meteor" 1925-27. Bd. 5 and atlas. 1936-1938.
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35. Tsukuda, K. On the surface temperature of the neighboring seas of Japan. Mem. Imp. mar. observ., Kobe. 6:239-254. 1938.
36. Uda, M., and G. Okamoto. On the monthly oceanographical charts of the adjacent seas of Japan based on the averages for the 11 years from 1918-1929, with discussion of the current-system inferred from these charts. Jour. Imp. fish. exper. sta., Tokyo. 1:39-54. 1930.
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# KEY TO REFERENCES USED IN PREPARING WORLD ATLAS OF SEA SURFACE TEMPERATURES

REGION	REFERENCE
Antarctic Ocean	3, 4, 11, 12, 19, 22
Arctic Ocean	1, 2, 7, 9, 13, 15, 18, 34
Atlantic Ocean	3, 7, 9, 13, 15, 24, 26, 38
Baffin Bay	38, 39
Baltic Sea	10
Bering Sea	5, 30, 40
Black Sea	3, 8, 17, 20, 21, 26, 28
California coast	31, 32, 33
China Sea	25, 27
Indian Ocean	19, 27
Irminger Sea	7, 9, 13, 15
Japan Sea	16, 25, 35, 36
Mediterranean Sea	3, 8, 17, 20, 21, 26, 28
Newfoundland (Grand Banks)	38
North Sea	6, 10
Norwegian Sea	7, 9, 13, 15, 18
Persian Ocean	5, 20, 25, 27, 40
Persian Gulf	29
Peru coast	14
Red Sea	41
South Pacific	5, 11, 12
White Sea	1, 2, 7, 13

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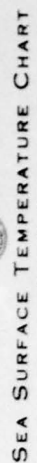
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ATLANTIC OCEAN  
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TEMPERATURES

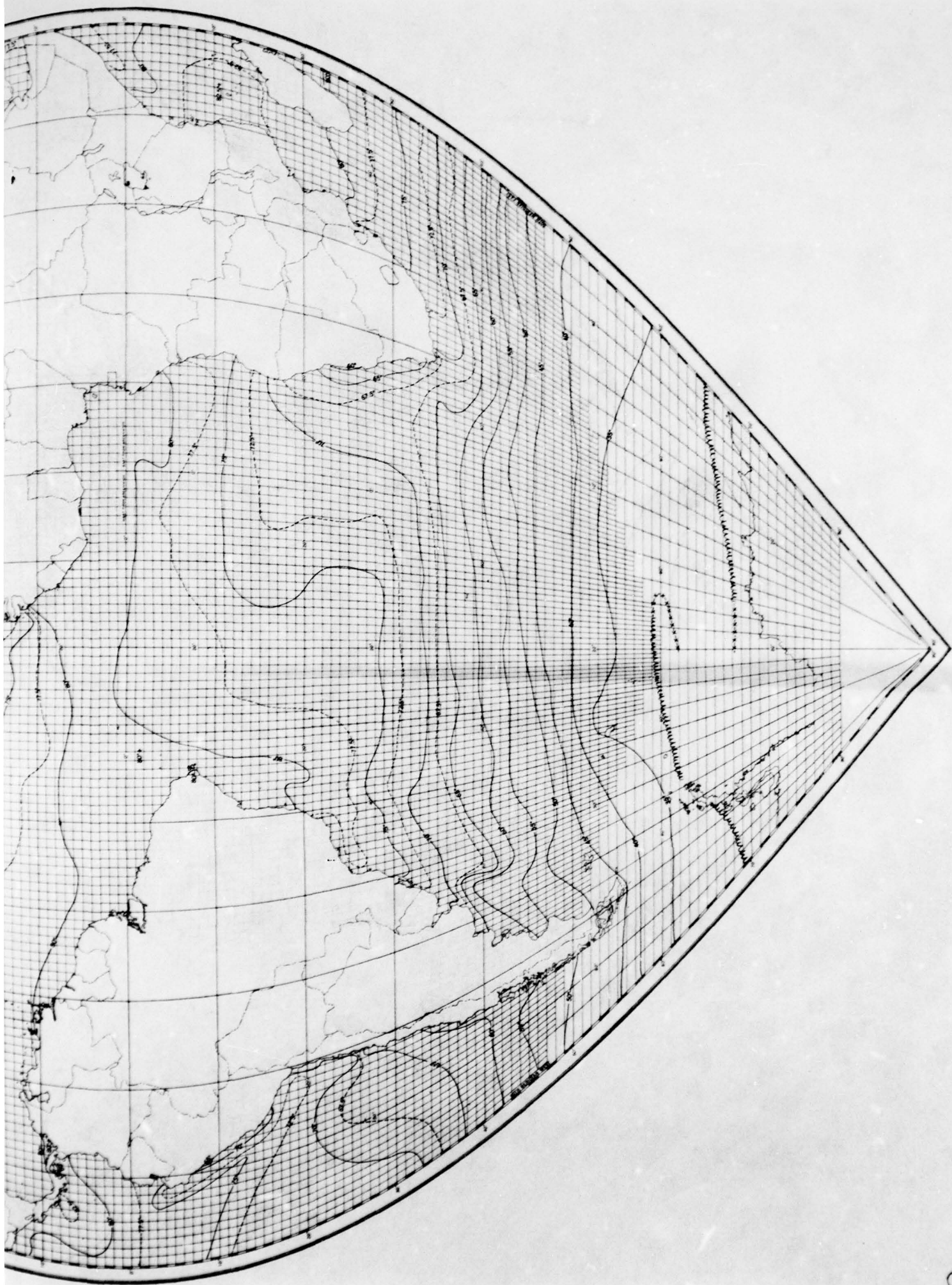
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### ICE LIMITS

**Abstract**

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EXTENSIVE USE LIMITED  
INTEGRATED INTO LIMITED

Compiled by the British Institute of Oceanography for the  
U.K. Army Air Forces from records in the U.K. National Oceanic  
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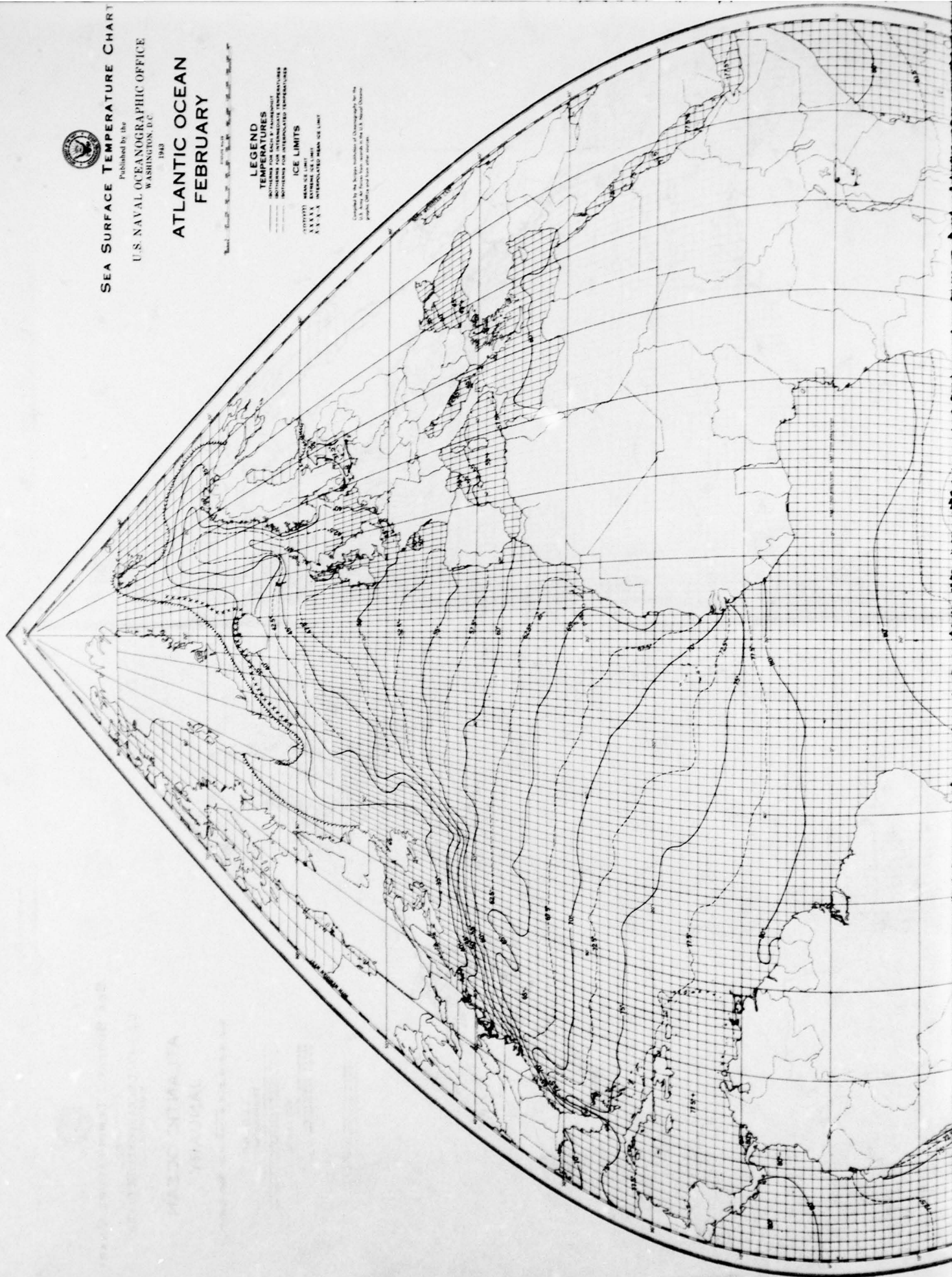
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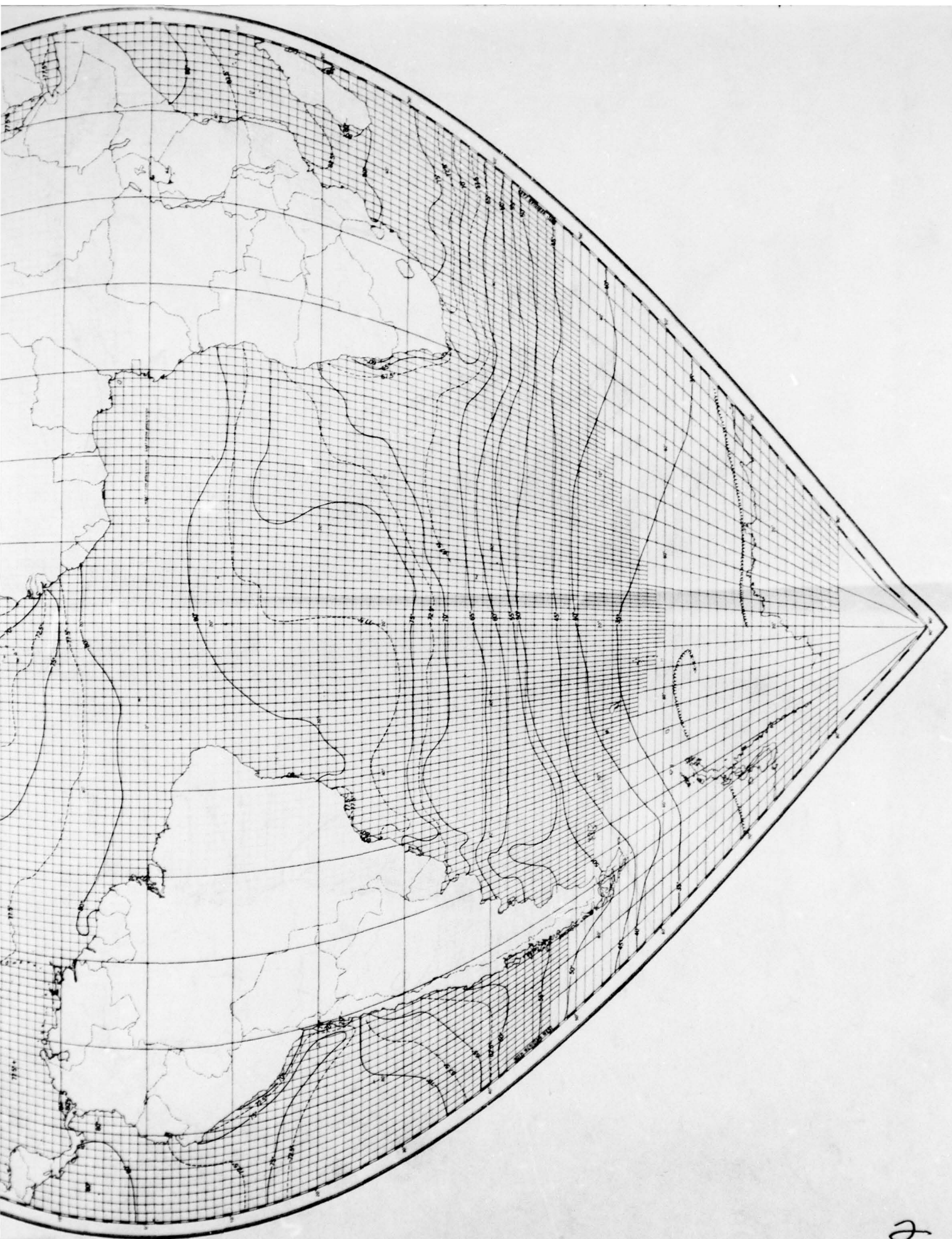


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**ICE LIMITS**  
--- MEAN ICE LIMIT  
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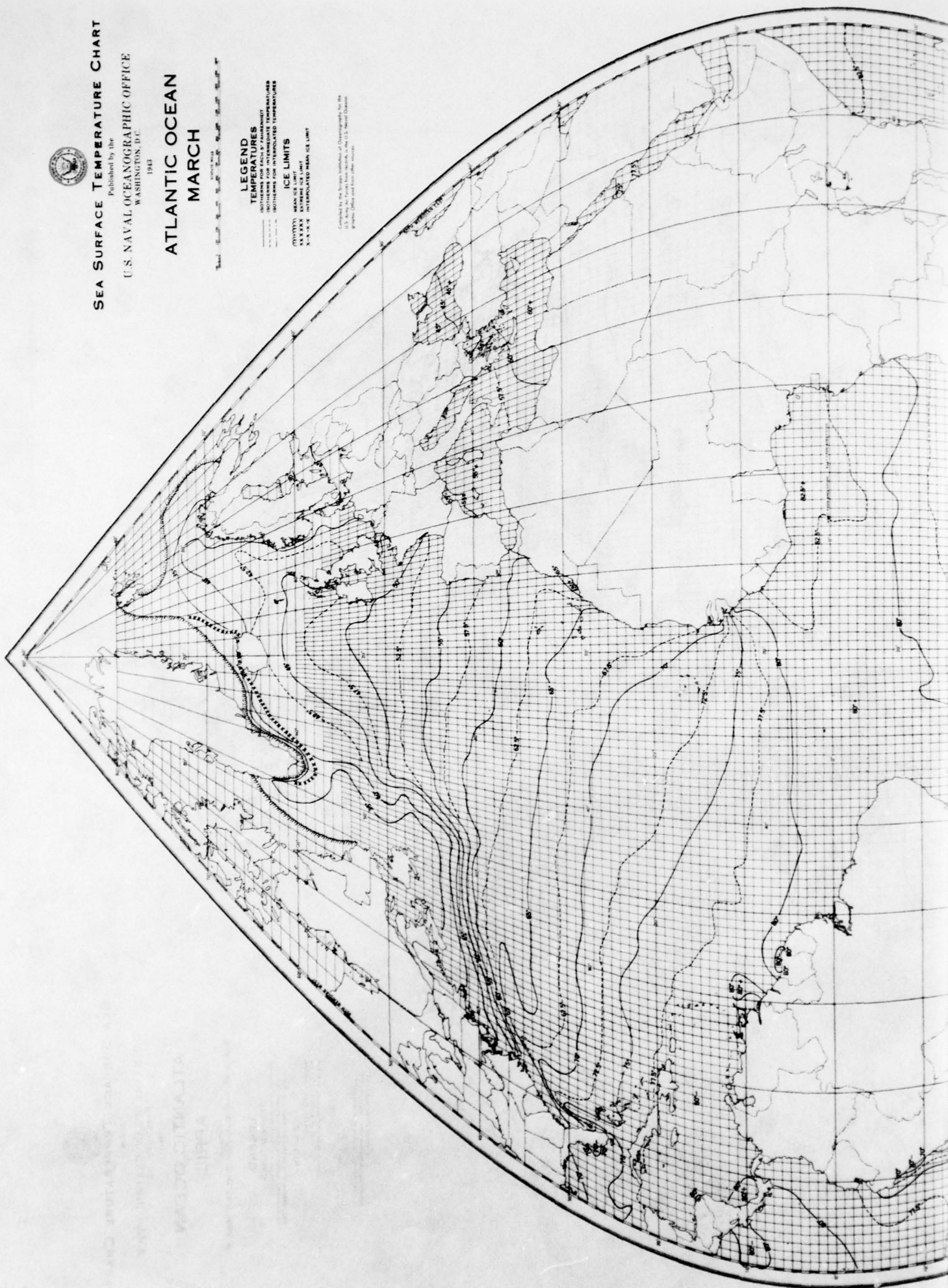
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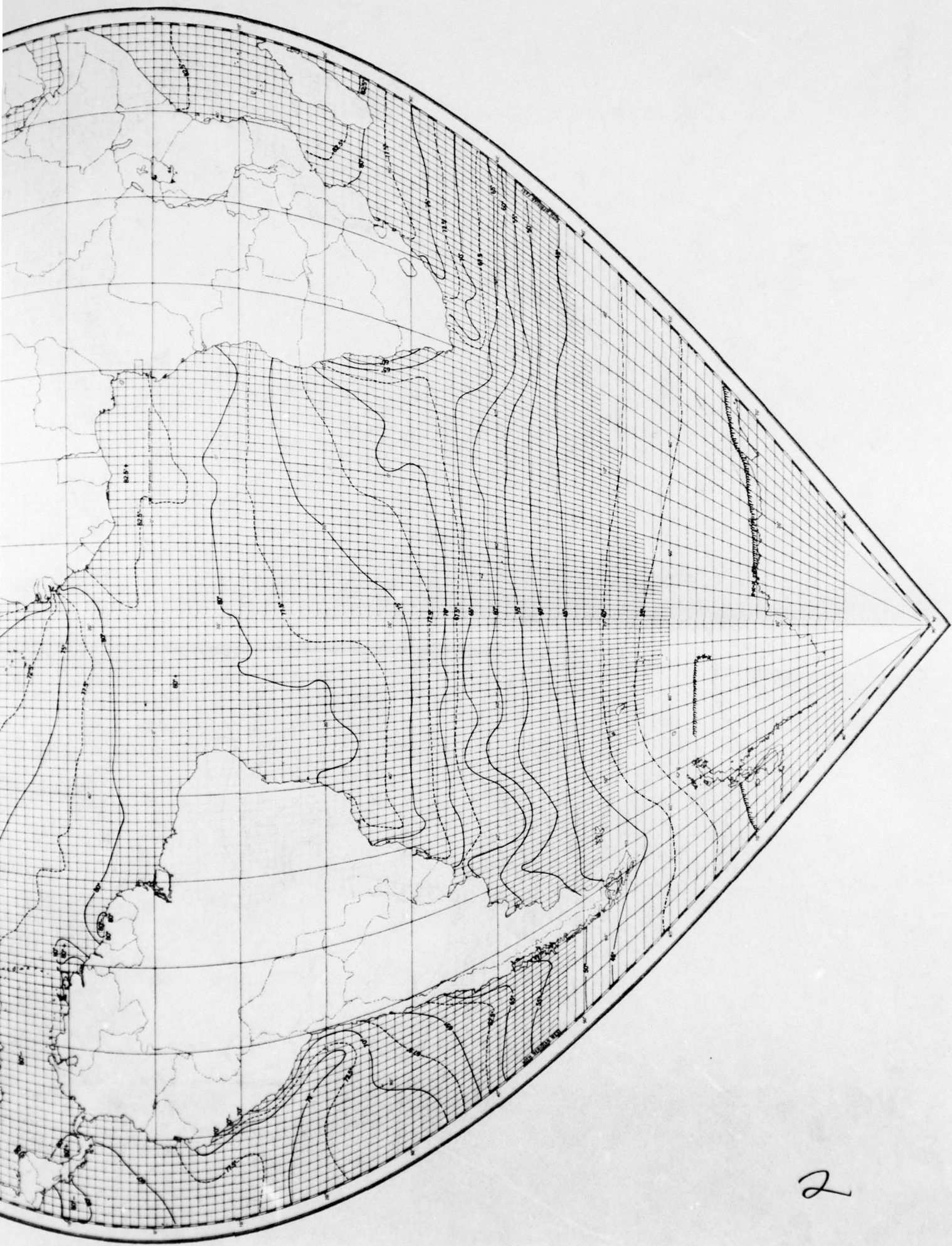
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--- MEAN ICE LIMIT  
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--- INTERPOLATED MEAN ICE LIMIT

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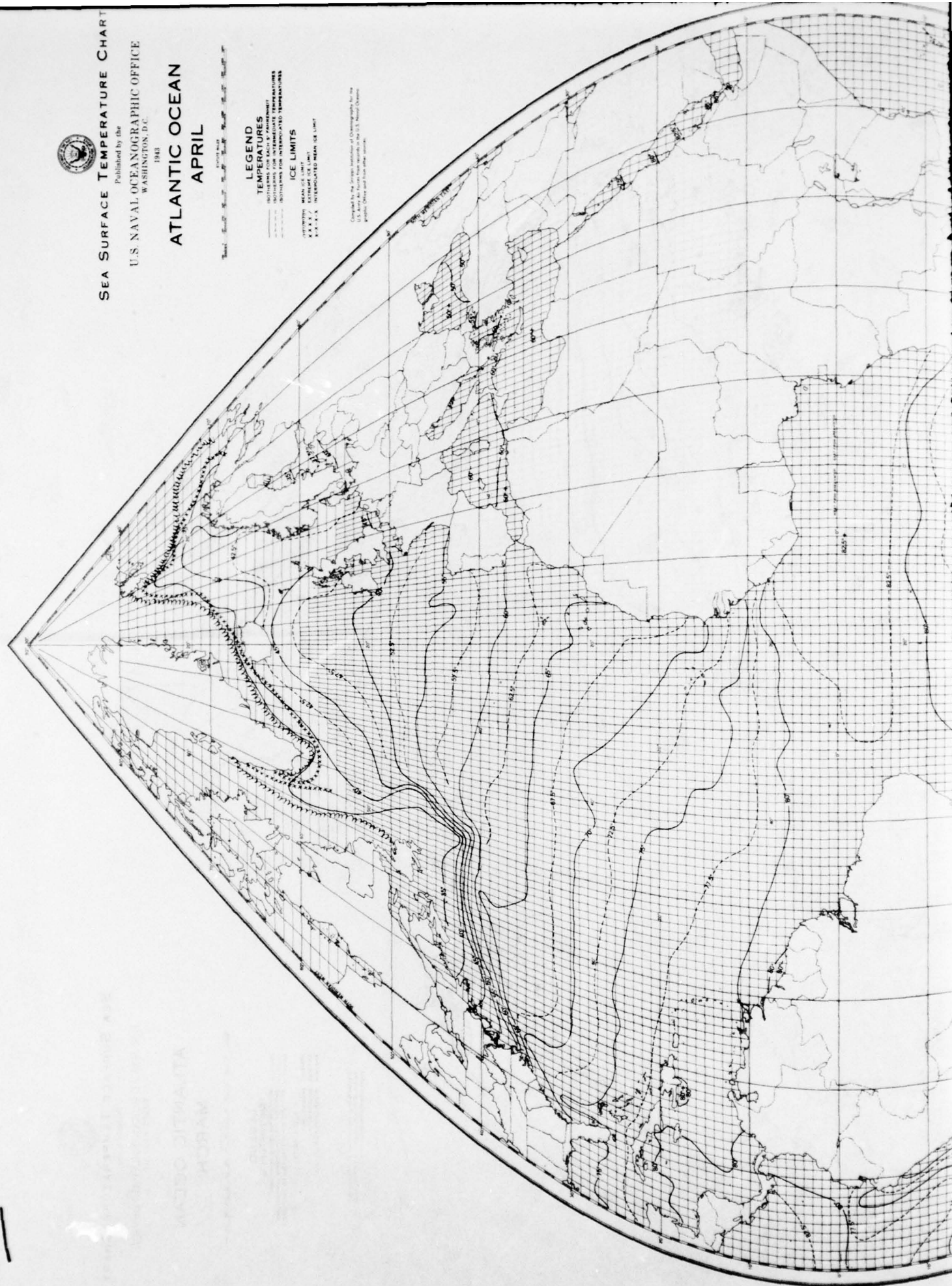
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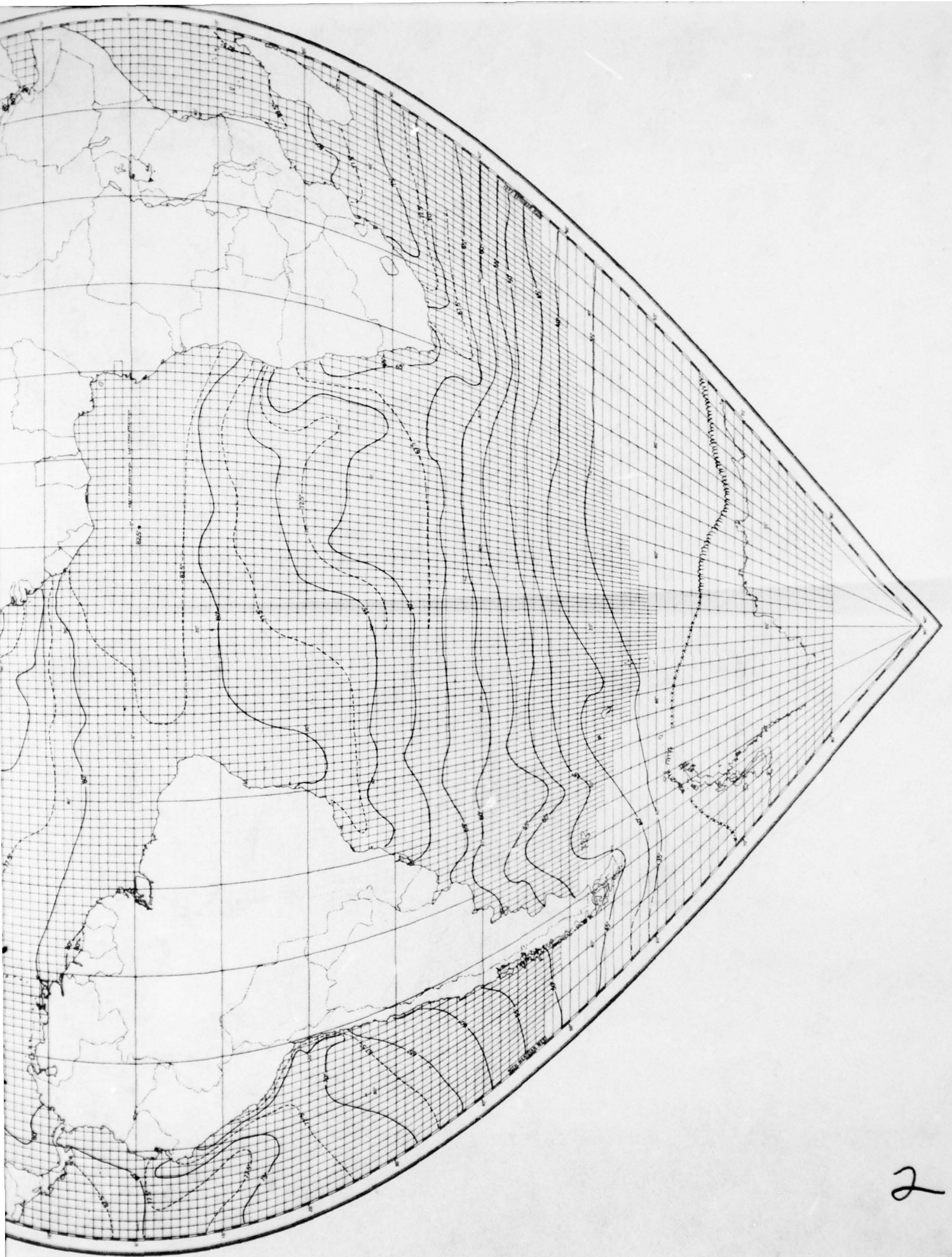
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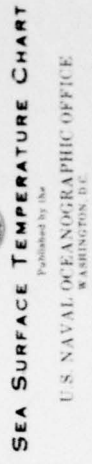
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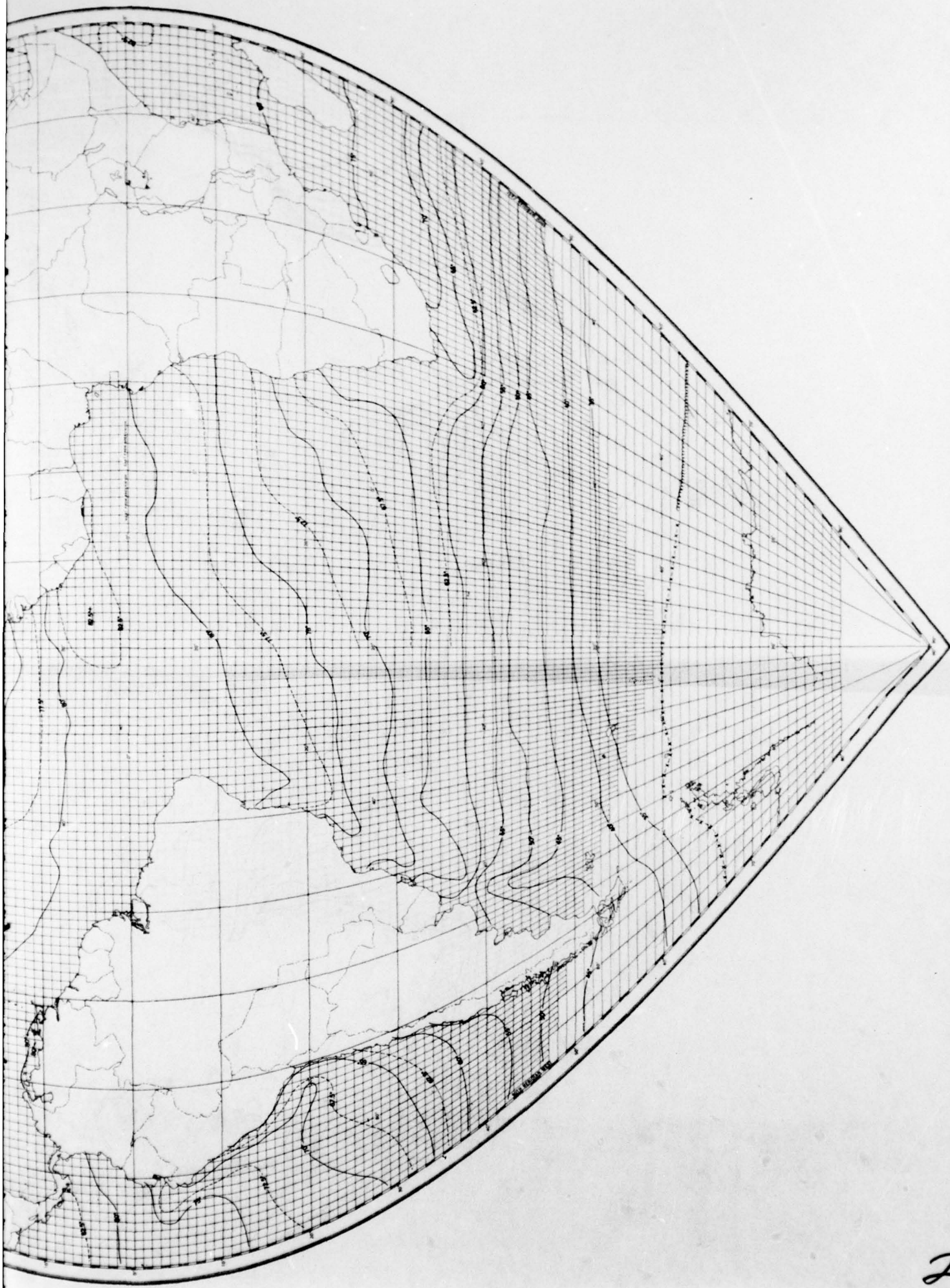
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— AIR IN THE THERMALLY UNSTABLE ZONE  
— AIR IN THE THERMALLY STABLE ZONE

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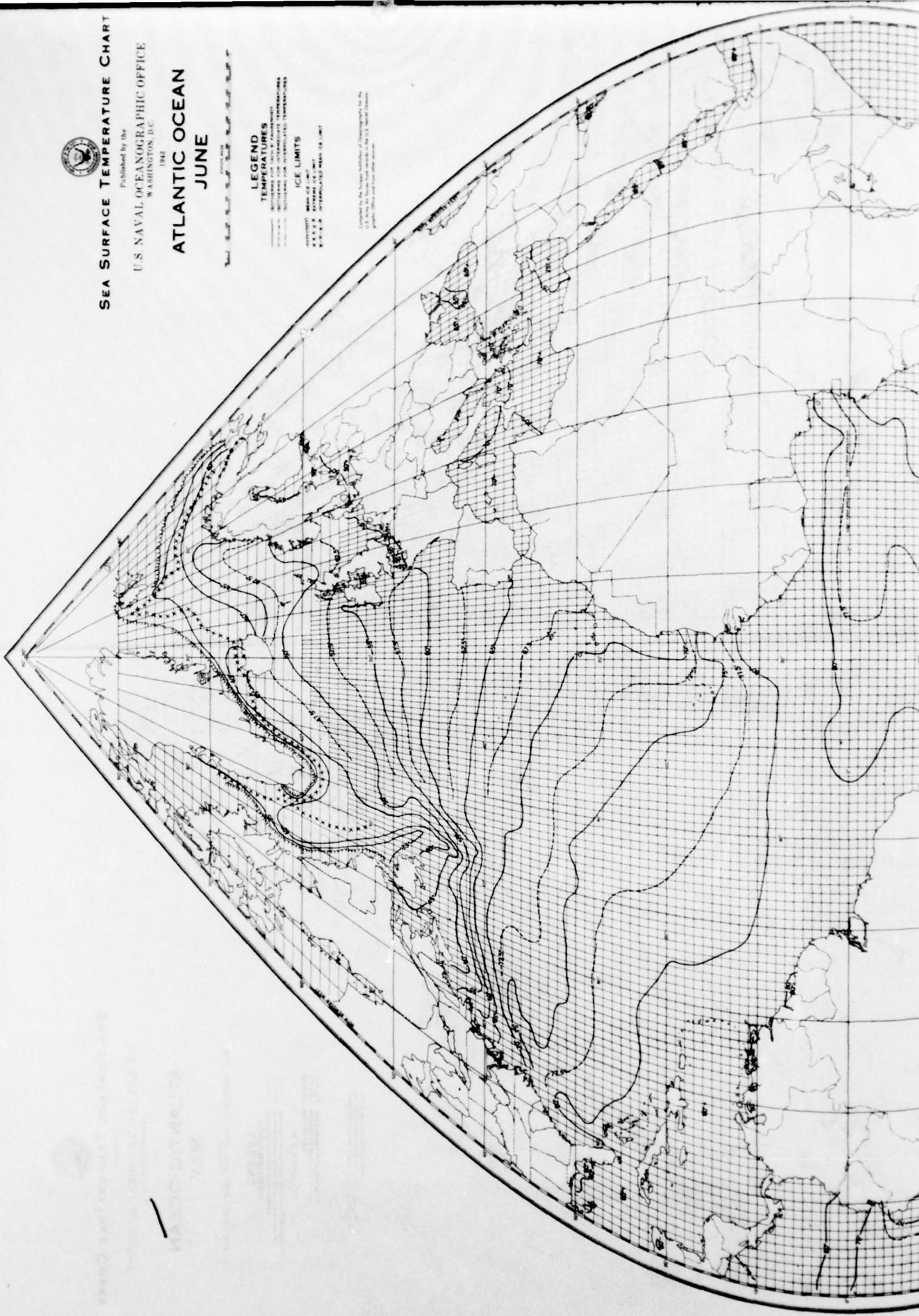
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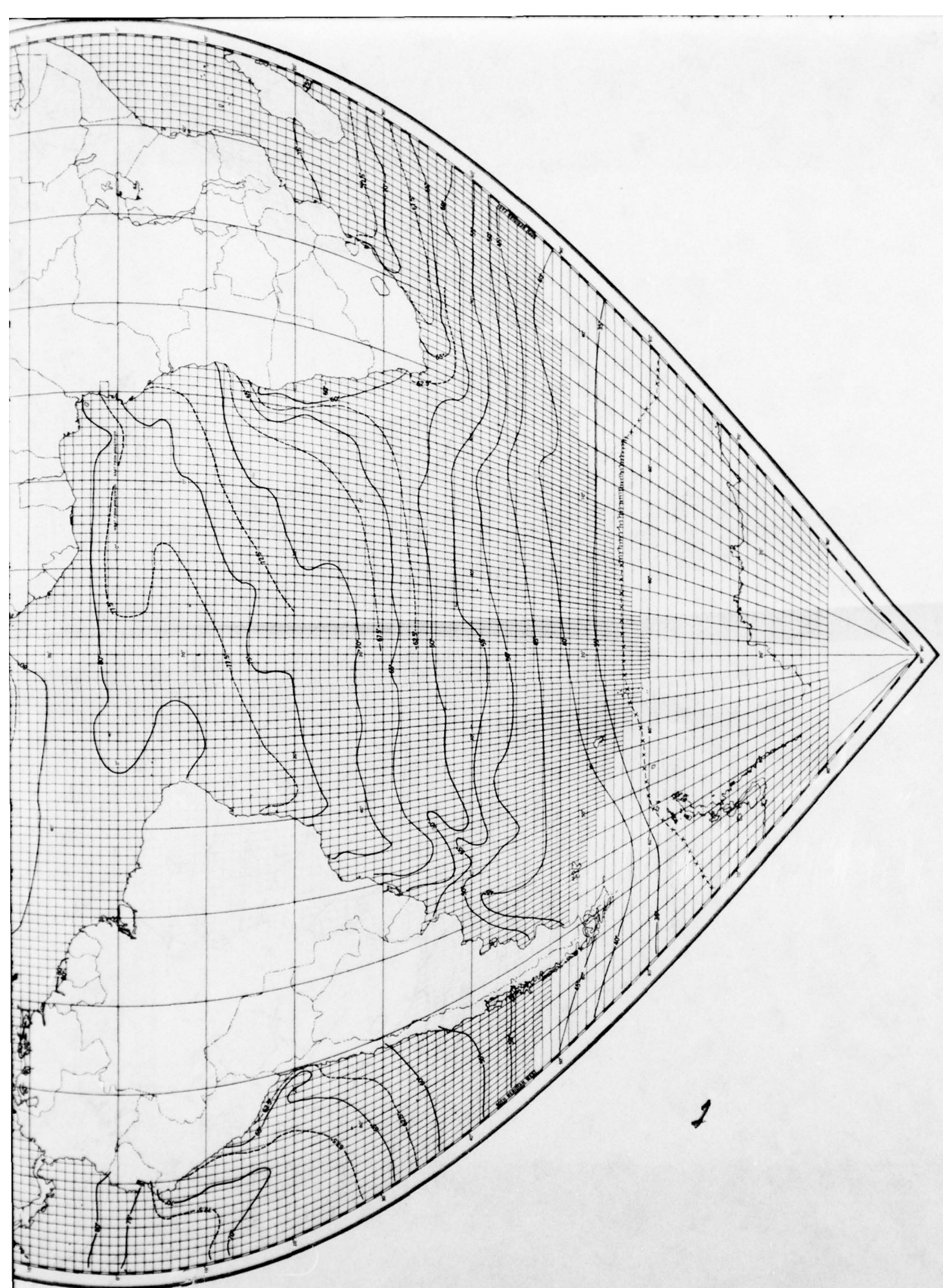
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--- INTERMEDIATE TEMPERATURES  
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- - - - - ISOTHERMS AND INTERMEDIATE TEMPERATURES  
**ICE LIMITS**  
- - - - - LIMIT OF ICE  
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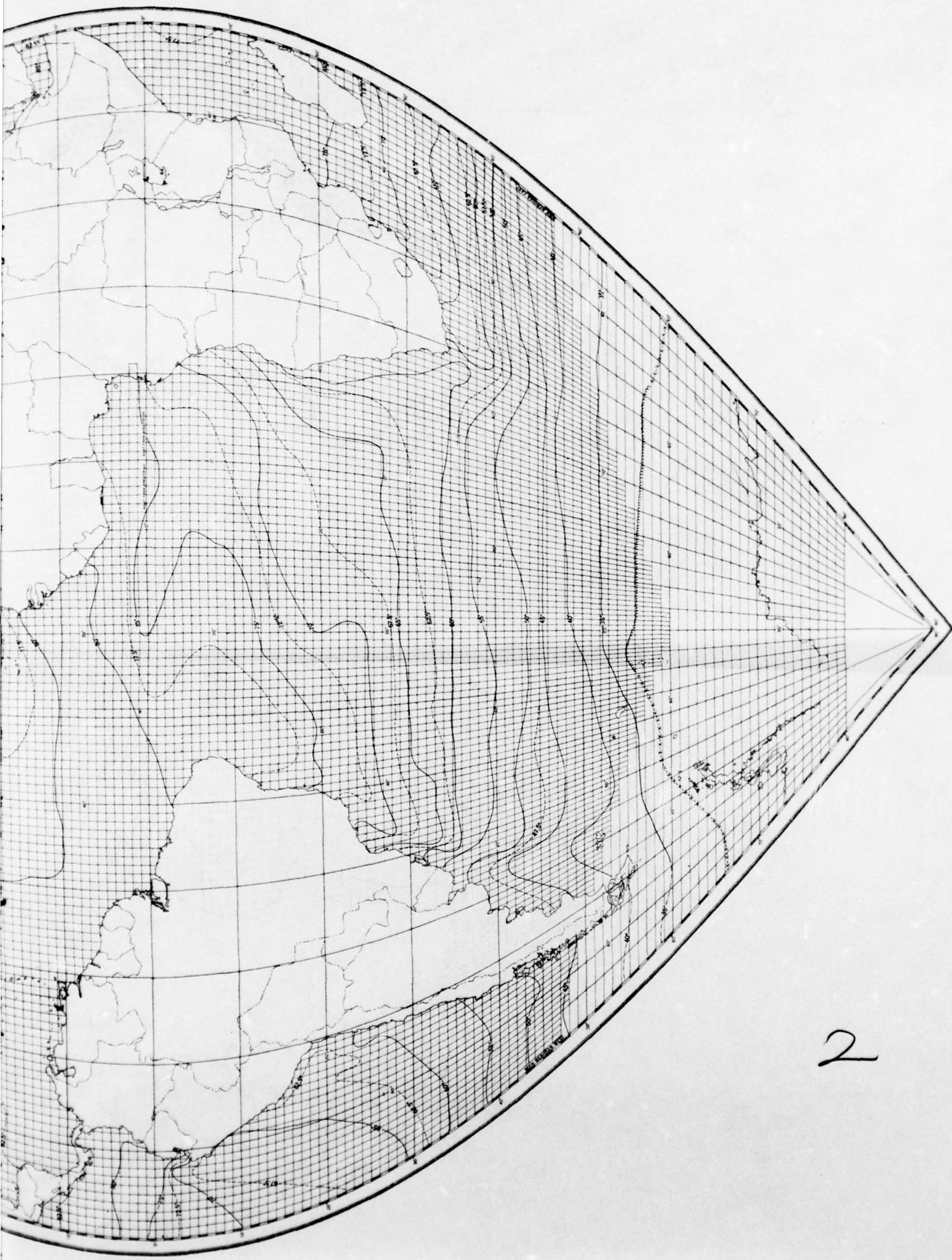
### LEGEND

TEMPERATURES

### PRICE LIMITS

MEAN ICE LIMIT  
EXTREME ICE LIMIT  
INTERPOLATED MEAN ICE LIMIT

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ATLANTIC OCEAN  
AUGUST

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TEMPERATURES

1. \_\_\_\_\_ (SOLUTIONS FOR EACH 5' ANSWER)

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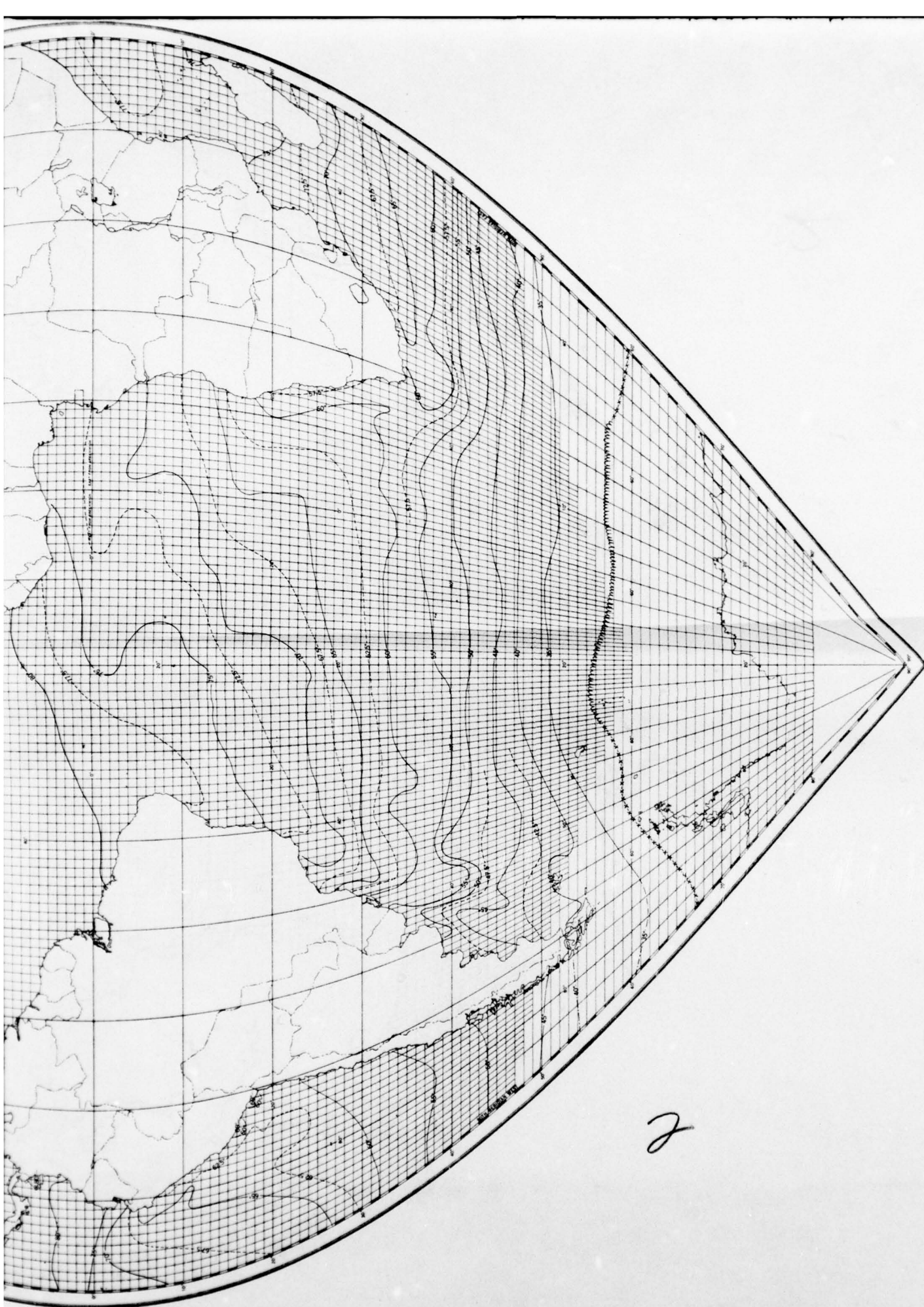
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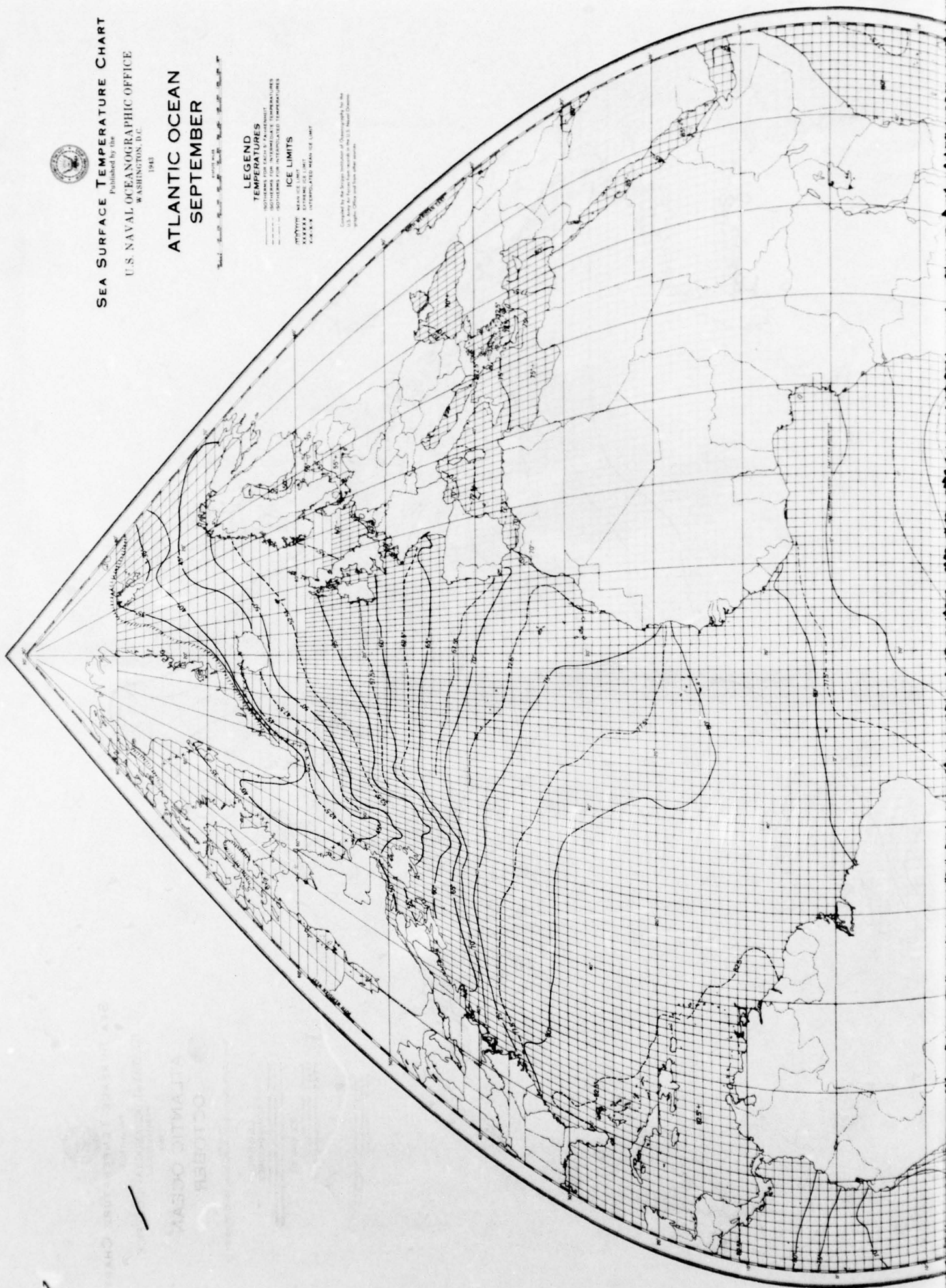
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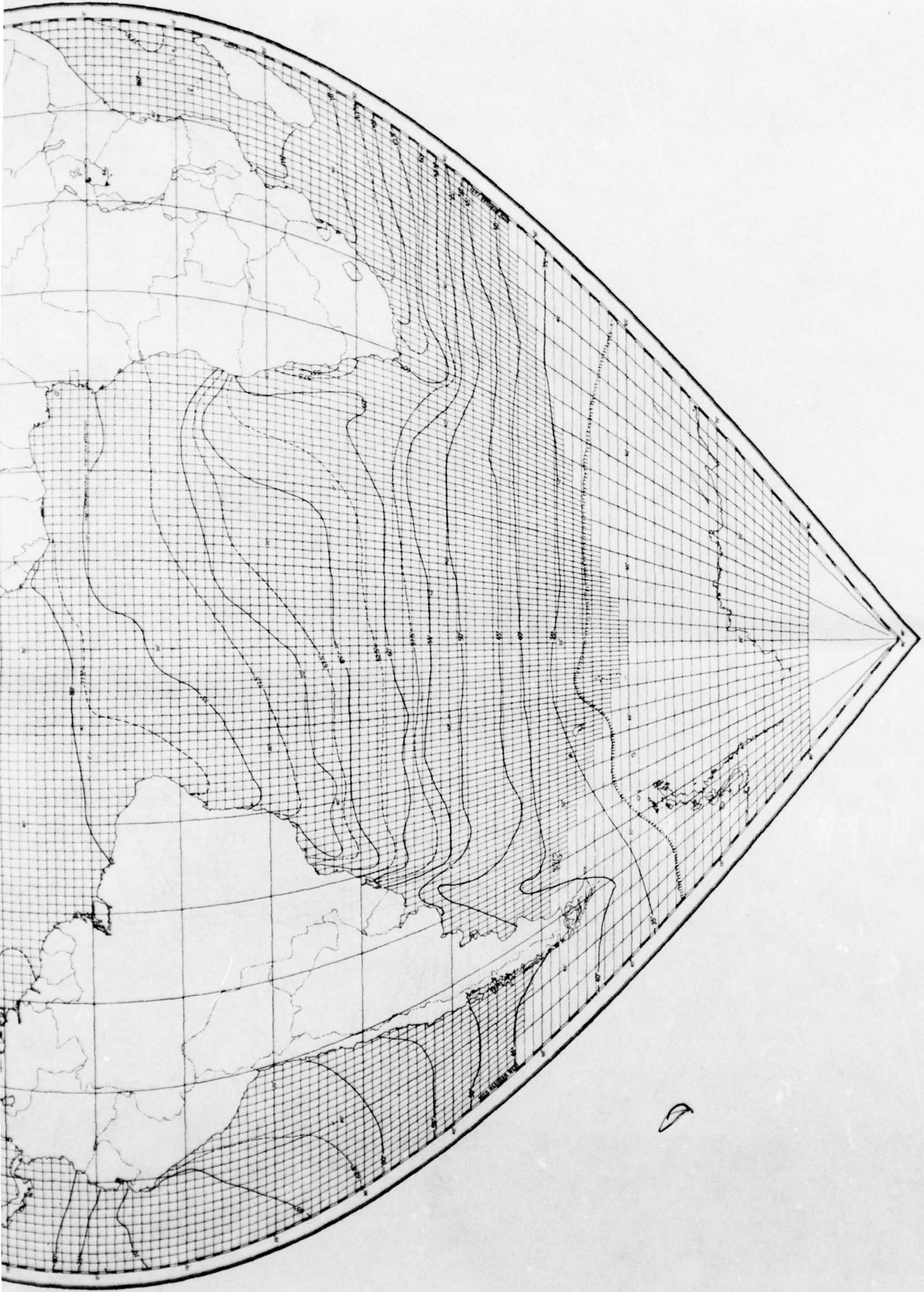
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- ICE LIMITS  
..... MEAN  
..... EXTENT  
..... INTERPOLATED MEAN ICE LIMIT

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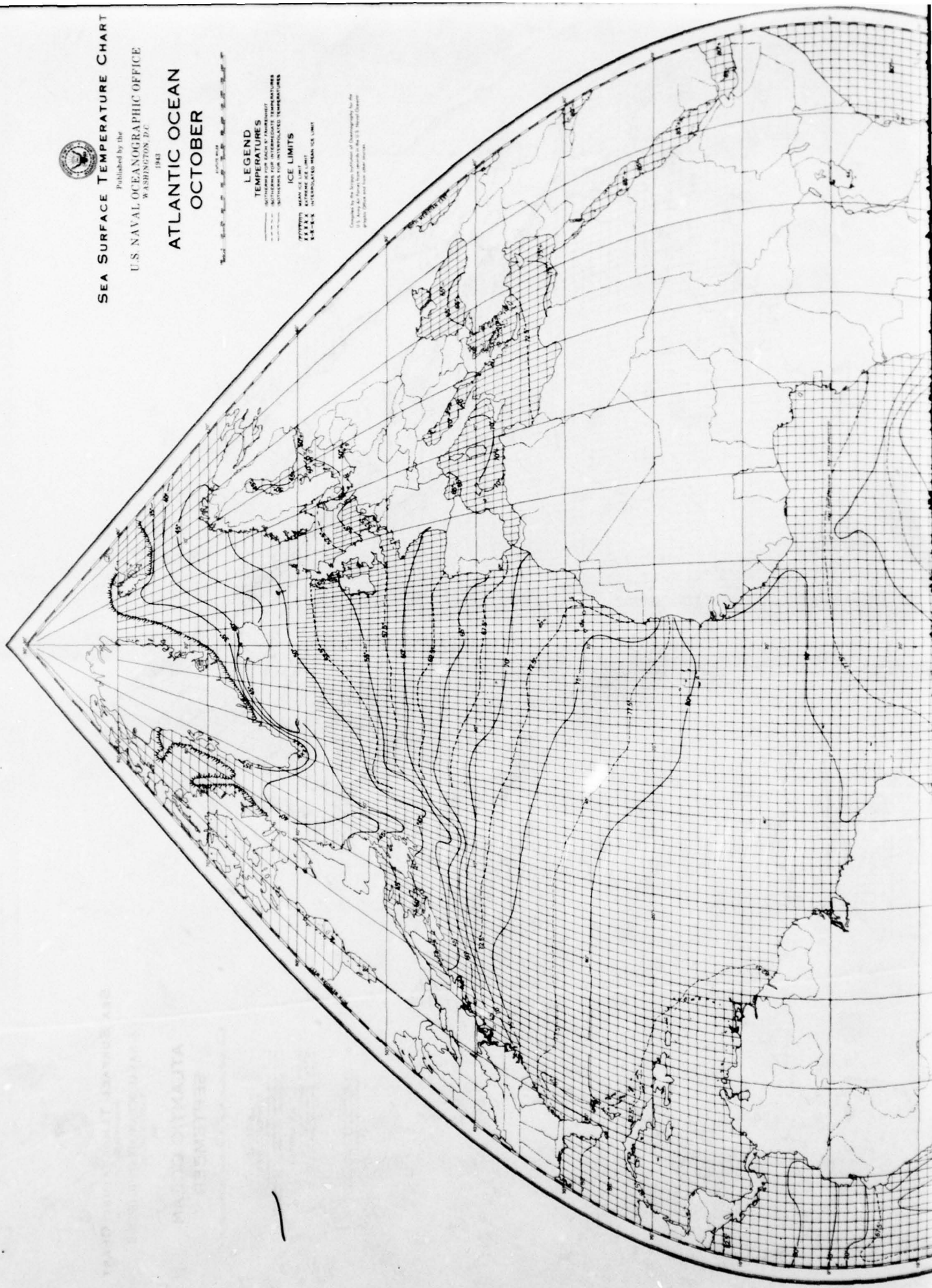
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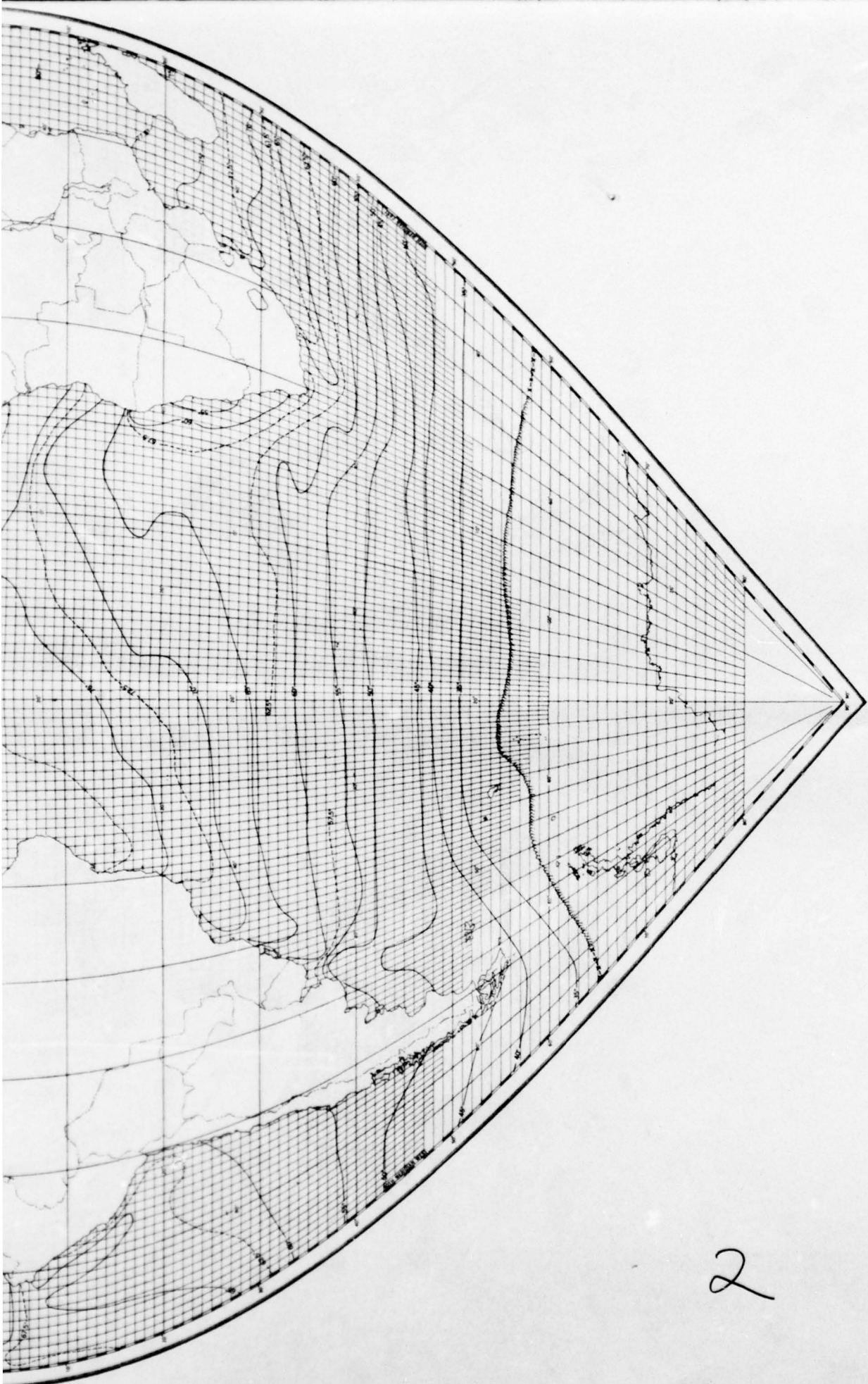
### ICE LIMITS

— SURFACE ICE LIMIT  
--- INTERPOLATED ICE LIMIT

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NOVEMBER

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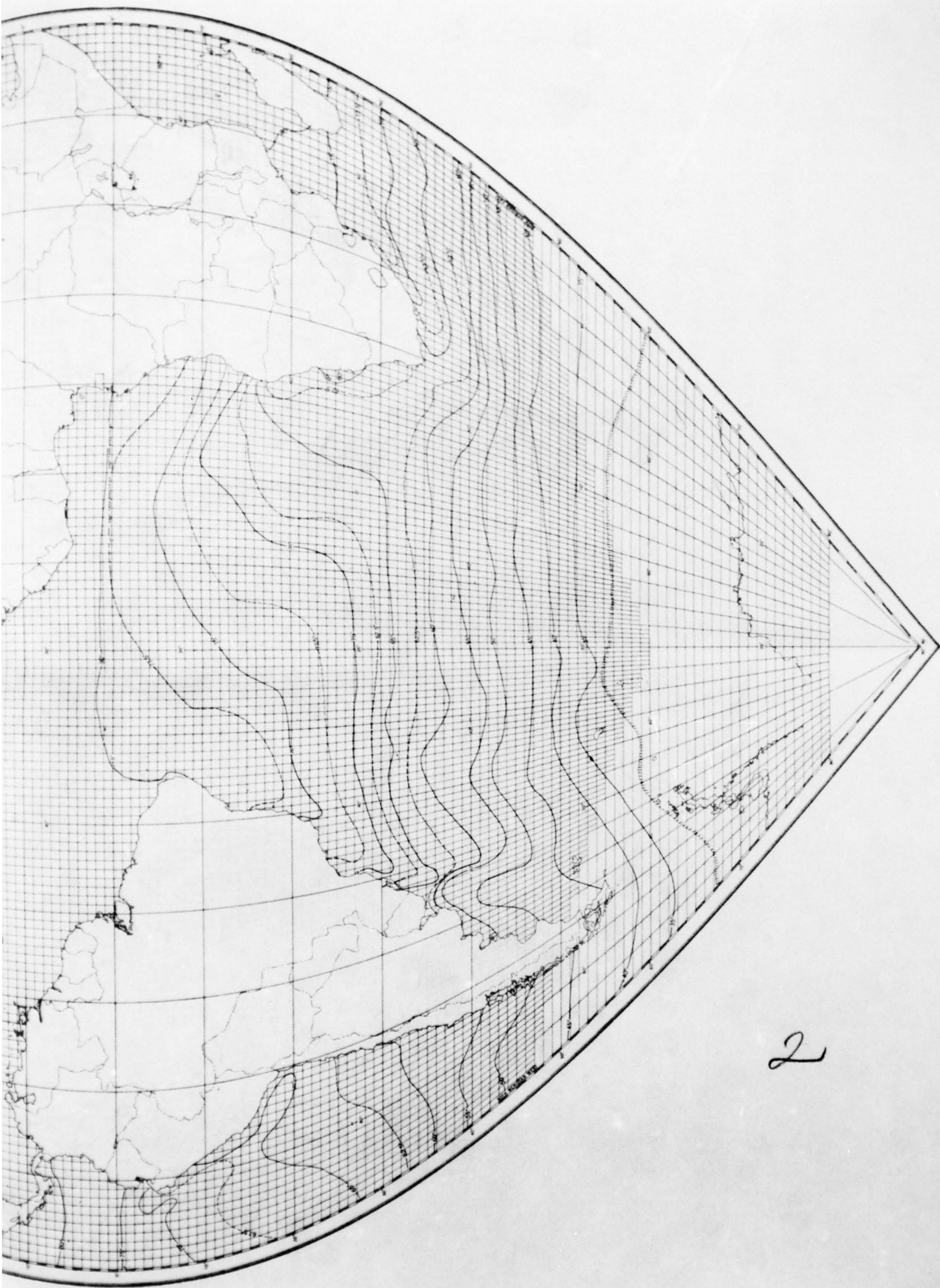
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**TEMPERATURES**  
NOTICE: TEMPS. FROM EACH OF: 1. AIRBORNE  
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98. FROM AIR SURFACE  
99. FROM AIR SURFACE  
100. FROM AIR SURFACE

### ICE LIMITS

PERCENT	MEAN OF LIMIT	EXTENDING THE LIMIT	INTERPOLATED MEAN OF LIMIT
100.00	1.00	1.00	1.00
90.00	1.00	1.00	1.00
80.00	1.00	1.00	1.00
70.00	1.00	1.00	1.00
60.00	1.00	1.00	1.00
50.00	1.00	1.00	1.00
40.00	1.00	1.00	1.00
30.00	1.00	1.00	1.00
20.00	1.00	1.00	1.00
10.00	1.00	1.00	1.00
0.00	1.00	1.00	1.00

controlled by the Japanese institutions of cinematography for the study during the history have already in the 19th century (Gardner).





2



# SEA SURFACE TEMPERATURE CHART

Published by the

U.S. NAVAL OCEANOGRAPHIC OFFICE

WASHINGTON, D.C.

1943

## ATLANTIC OCEAN DECEMBER

### LEGEND

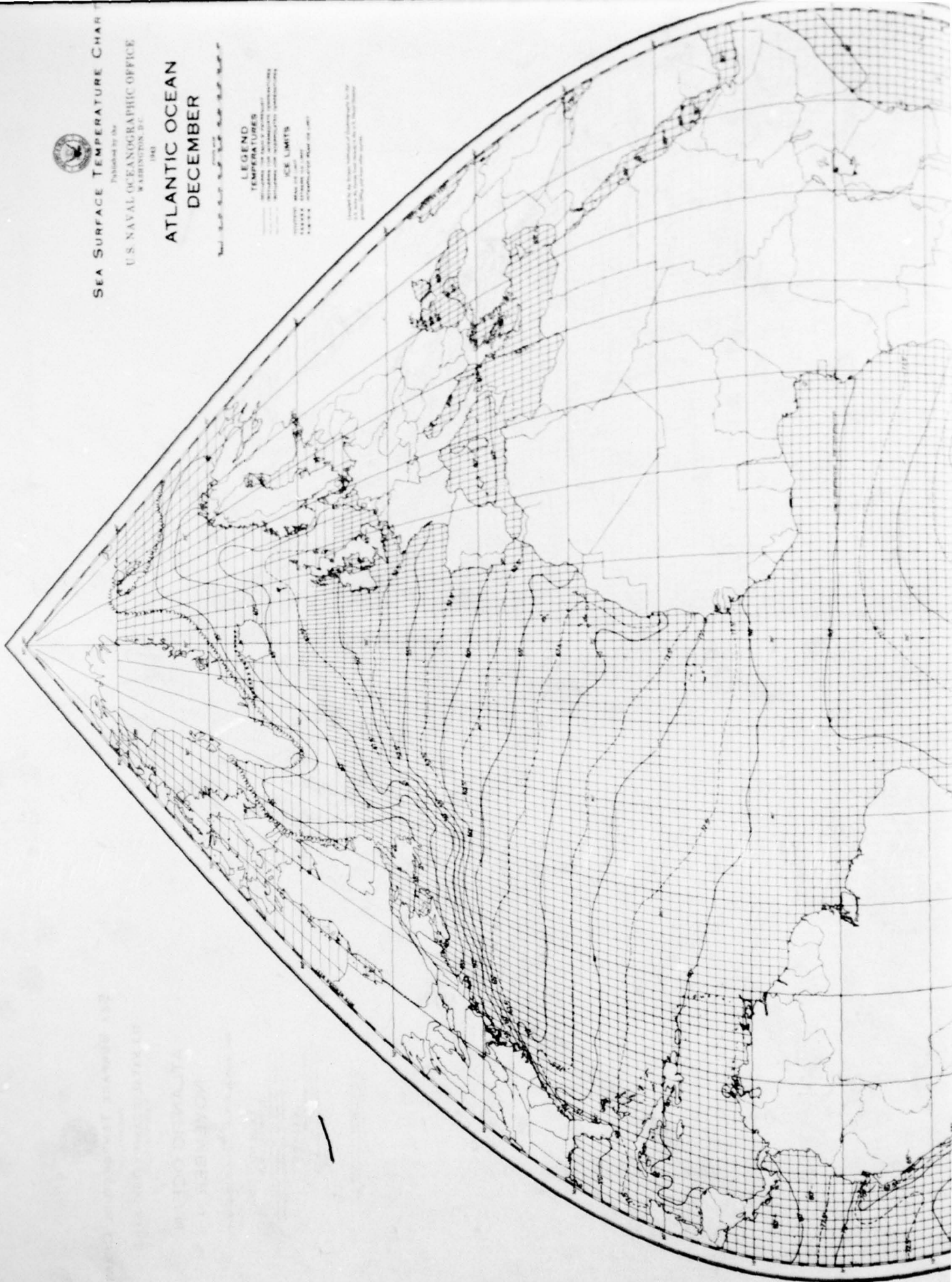
#### TEMPERATURES

— 100° F. and above  
— 90° F. and above  
— 80° F. and above  
— 70° F. and above  
— 60° F. and above  
— 50° F. and above  
— 40° F. and above  
— 30° F. and above  
— 20° F. and above  
— 10° F. and above  
— 0° F. and above  
— Below 0° F.

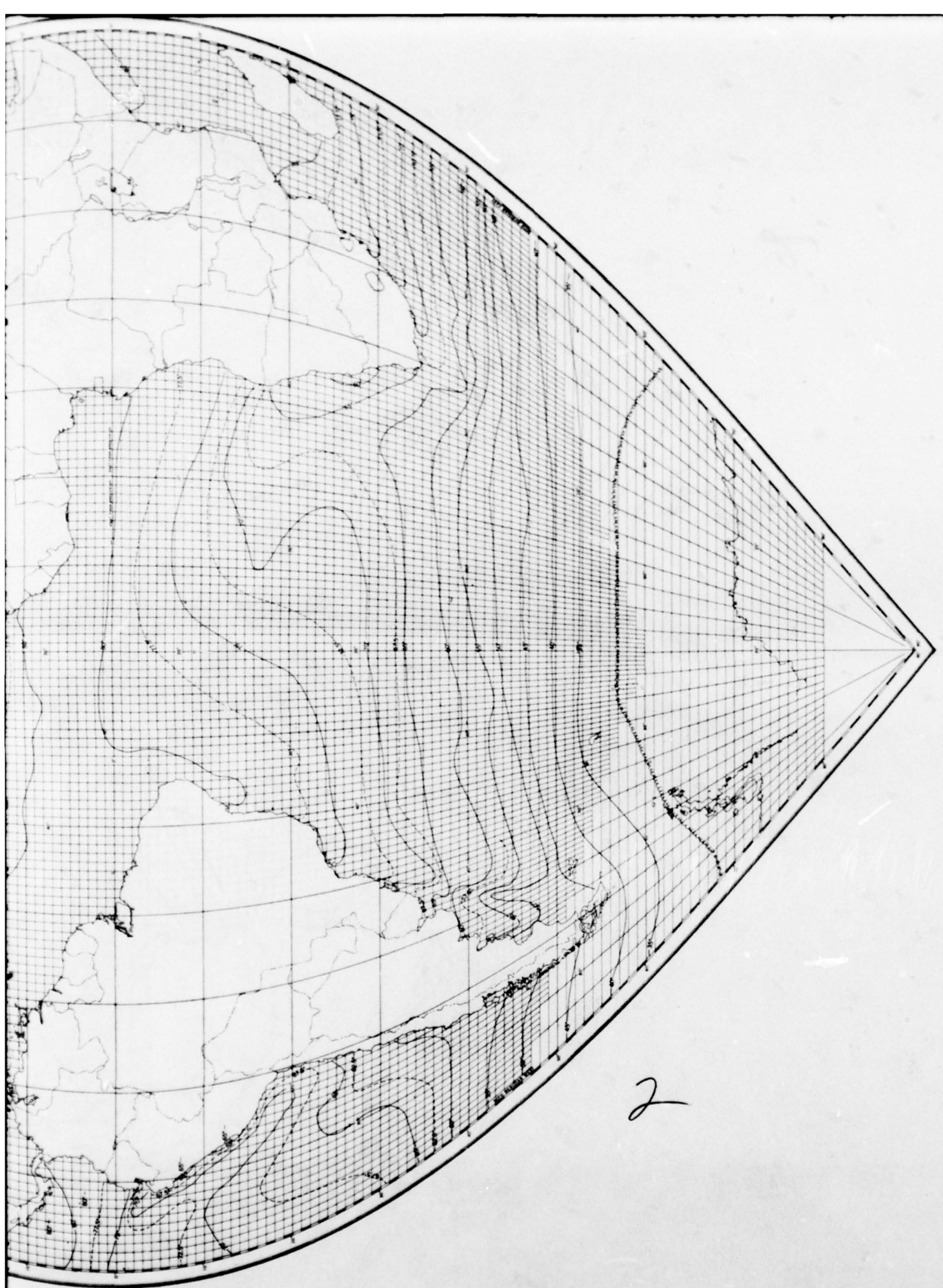
#### ICE LIMITS

— Mean ice limit  
— Maximum ice limit  
— Minimum ice limit  
— Ice limit for 1943

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2



SEA SURFACE TEMPERATURE CHART  
Published by the  
U.S. NAVAL OCEANOGRAPHIC OFFICE  
WASHINGTON, D.C.  
1943

EASTERN PACIFIC OCEAN  
JANUARY

Scale 1:1,000,000

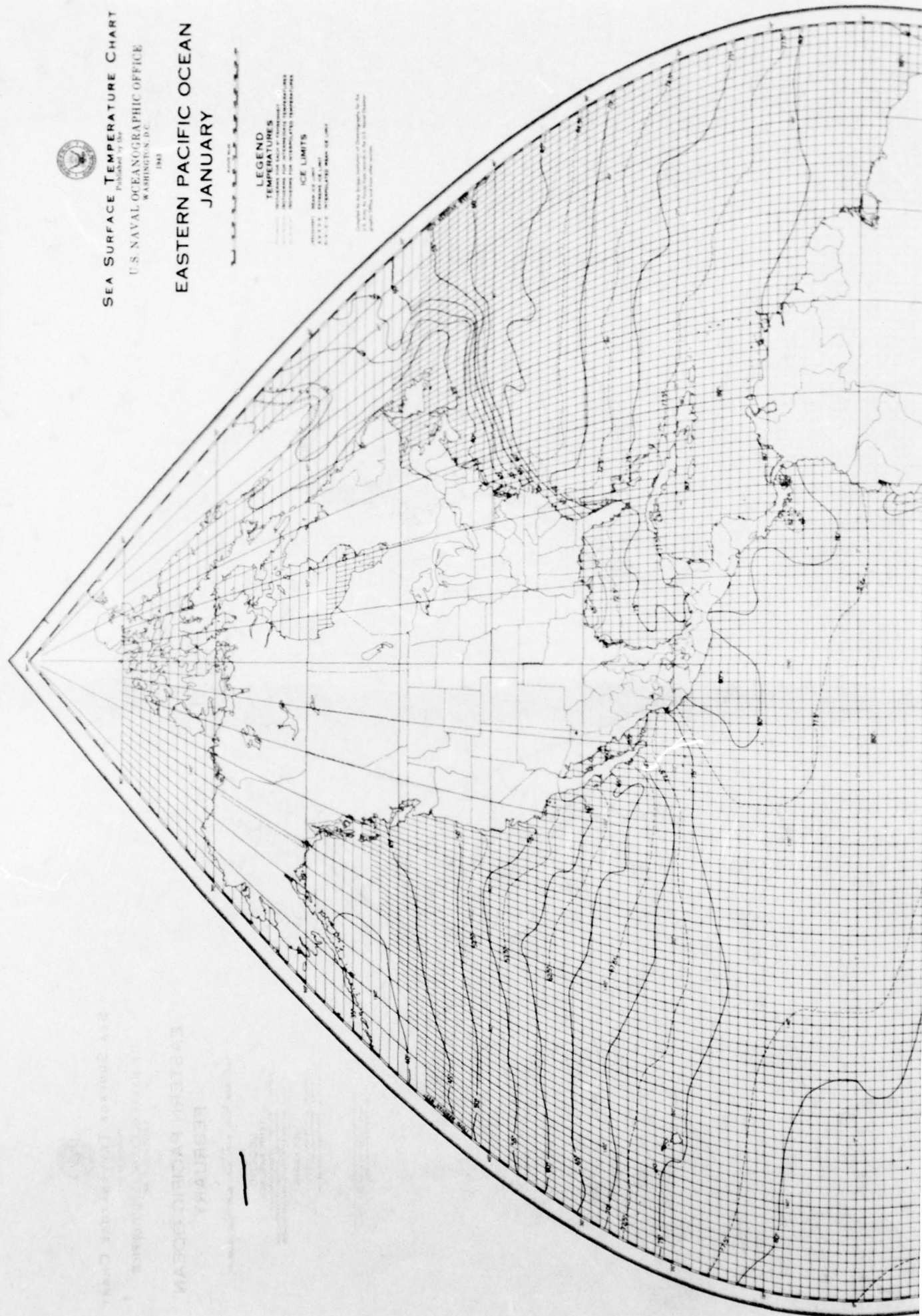
LEGEND

TEMPERATURES  
Indicated by numbers in degrees Fahrenheit  
Indicated by numbers in degrees Celsius

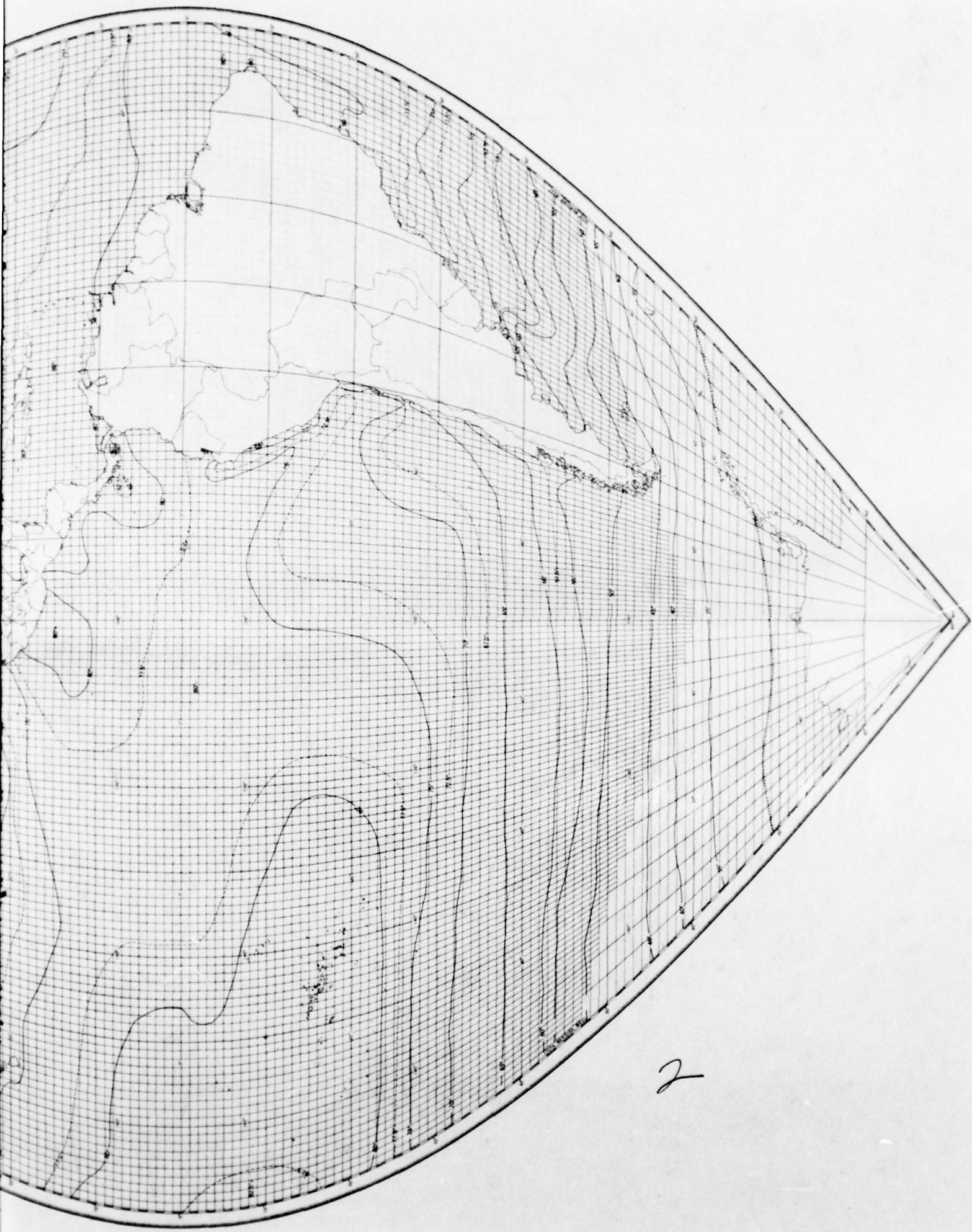
ICE LIMITS

Observed Mean of Jan.  
Estimated Mean of Jan.  
Estimated Mean of Feb.

Source: U.S. Navy Hydrographic Office, based on data from the U.S. Navy Hydrographic Office and other sources.







2



# SEA SURFACE TEMPERATURE CHART

Published by the  
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WASHINGTON, D.C.

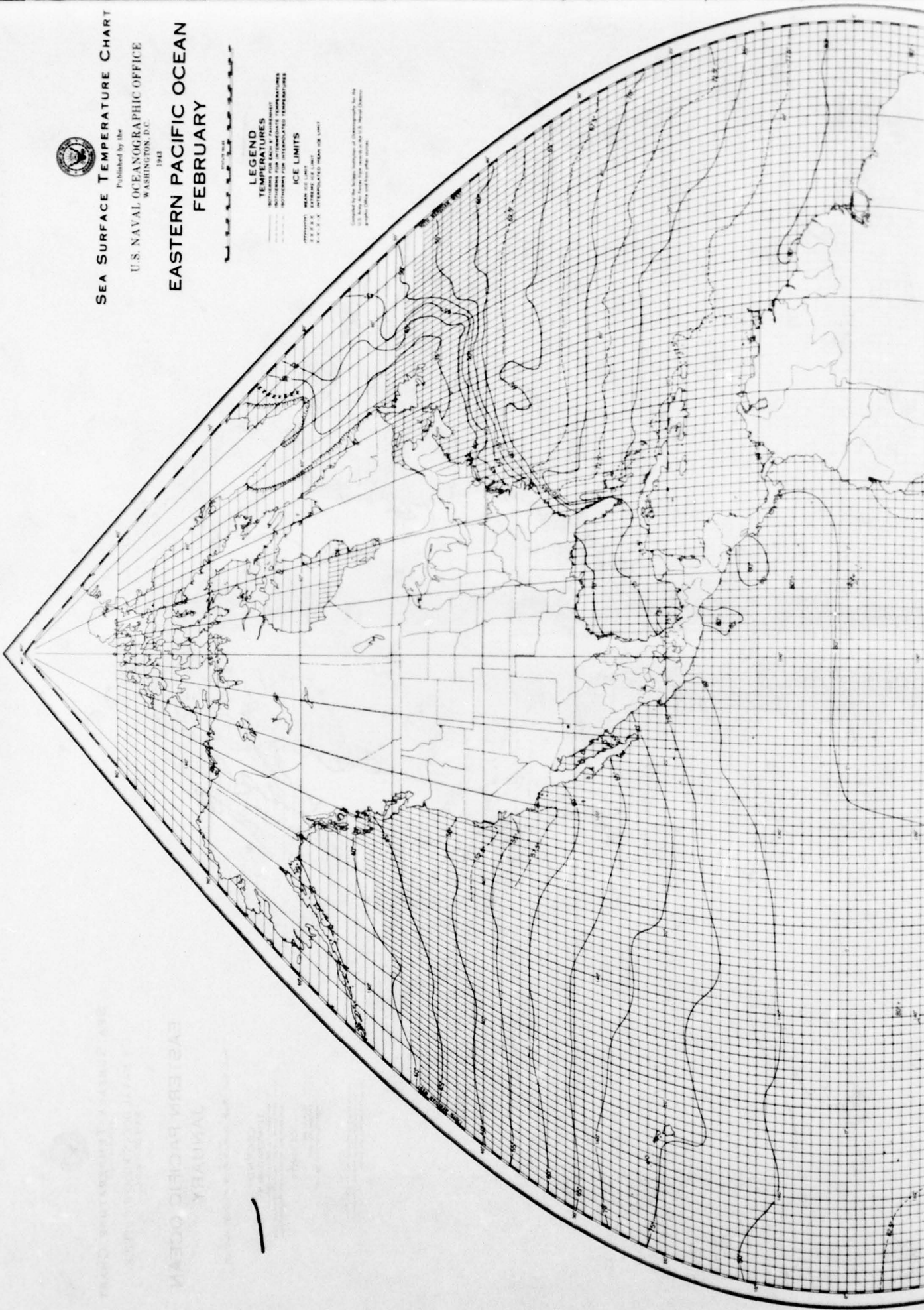
## EASTERN PACIFIC OCEAN FEBRUARY

EASTERN PACIFIC OCEAN

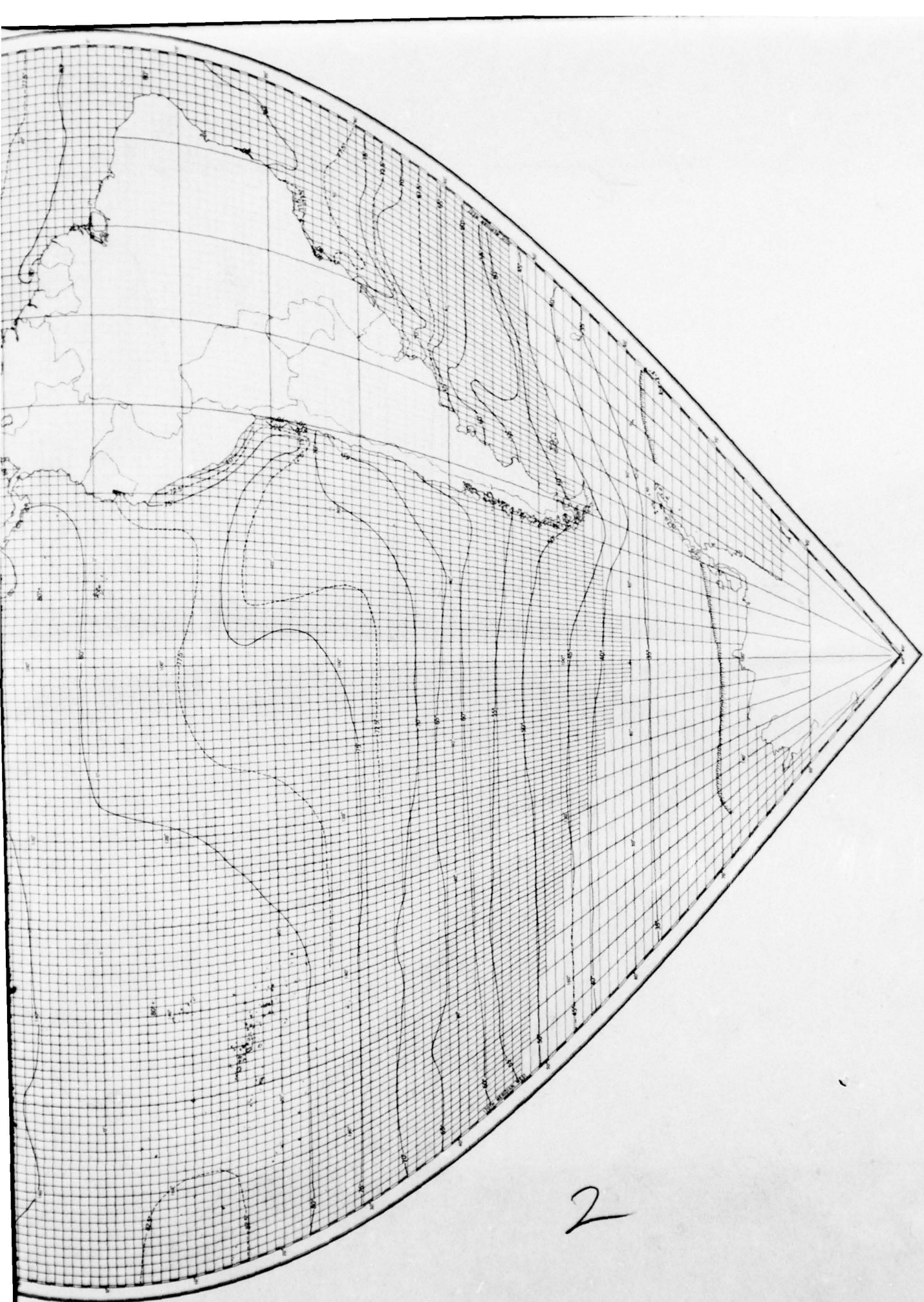
1:100,000

**LEGEND**  
**TEMPERATURES**  
SURFACE TEMPERATURES  
SURFACE TEMPERATURES  
SURFACE TEMPERATURES  
SURFACE TEMPERATURES  
**ICE LIMITS**  
MEAN OF 5  
EXTREMES OF 5  
INTERPOLATED MEAN OF 5

Compiled by the Hydrographic Office, Washington, D.C.  
from the reports of the U.S. Navy and other sources.







2



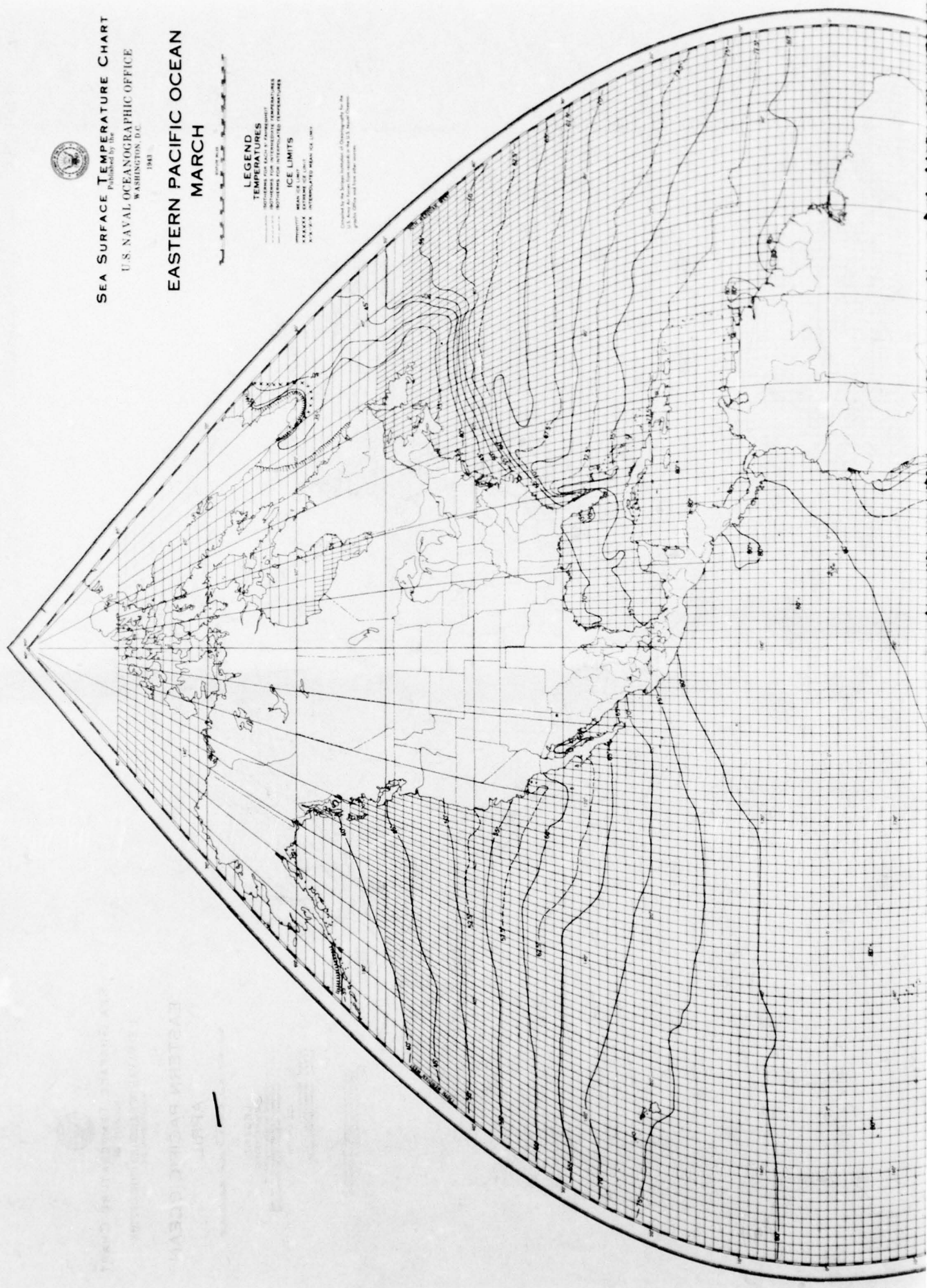
SEA SURFACE TEMPERATURE CHART  
Published by the  
U.S. NAVAL OCEANOGRAPHIC OFFICE  
WASHINGTON, D.C.  
1943

EASTERN PACIFIC OCEAN  
MARCH

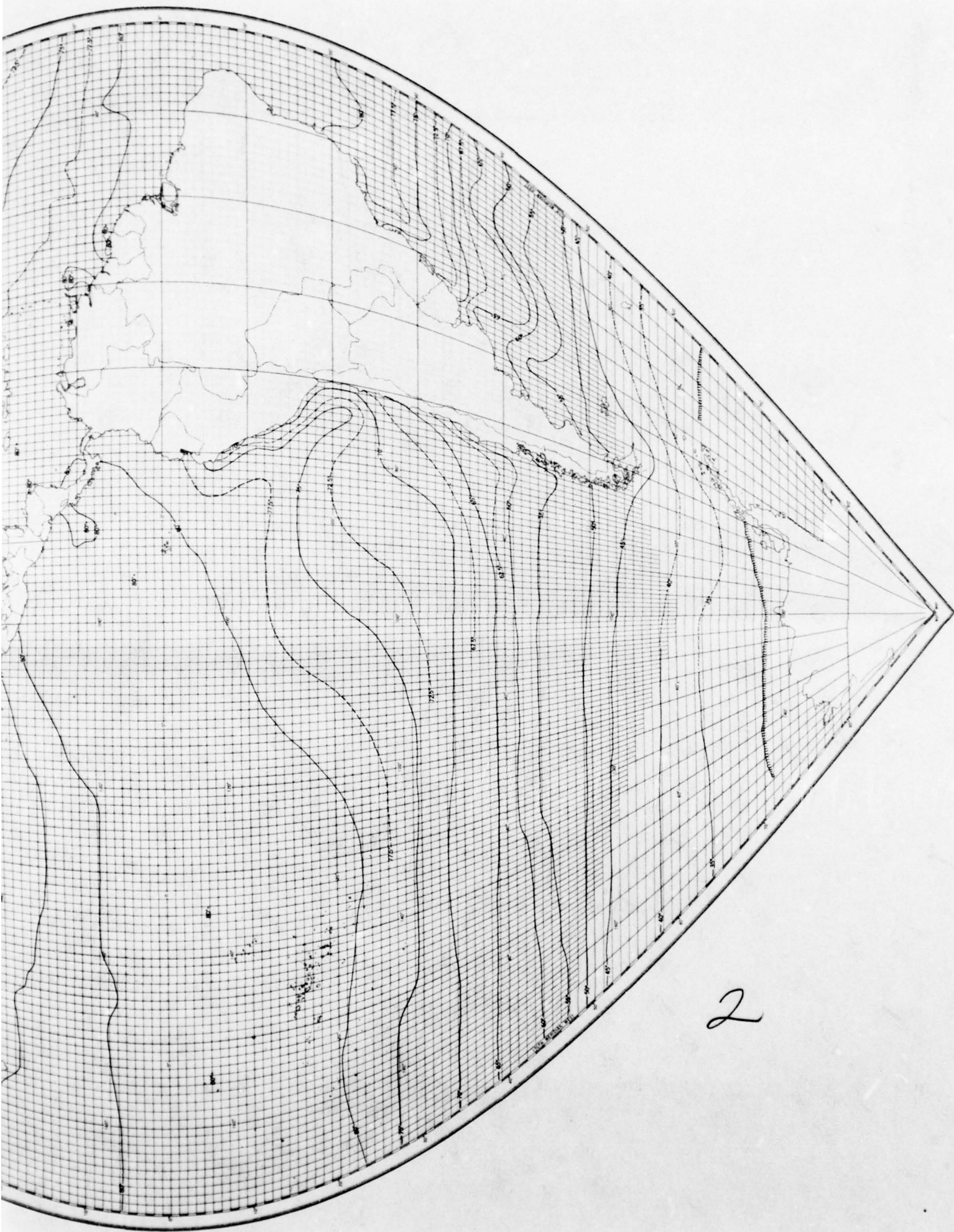
TEMPERATURES IN DEGREES FAHRENHEIT

- LEGEND
- TEMPERATURES
- ..... INTERPOLATED MEAN SURFACE TEMPERATURES
  - ..... INTERPOLATED MEAN SURFACE TEMPERATURES
  - ..... INTERPOLATED MEAN SURFACE TEMPERATURES
- ICE LIMITS
- ..... MEAN
  - ..... EXTREME
  - ..... INTERPOLATED MEAN

Compiled by the Surface Division of the Hydrographic Office for the U.S. Navy and the U.S. Navy Hydrographic Office and from other sources.







2



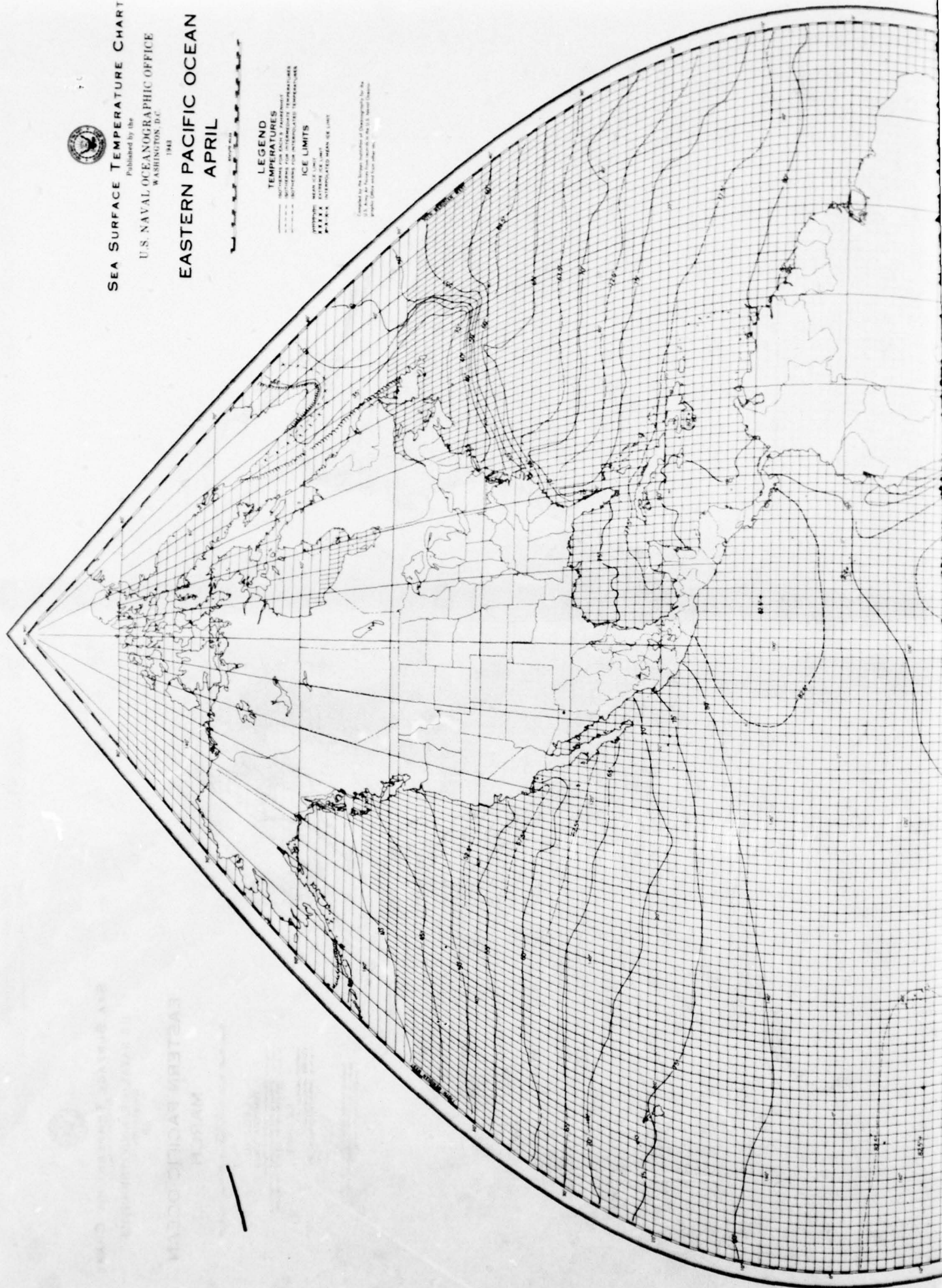
SEA SURFACE TEMPERATURE CHART  
Published by the  
U.S. NAVAL OCEANOGRAPHIC OFFICE  
WASHINGTON, D.C.

1943  
EASTERN PACIFIC OCEAN  
APRIL

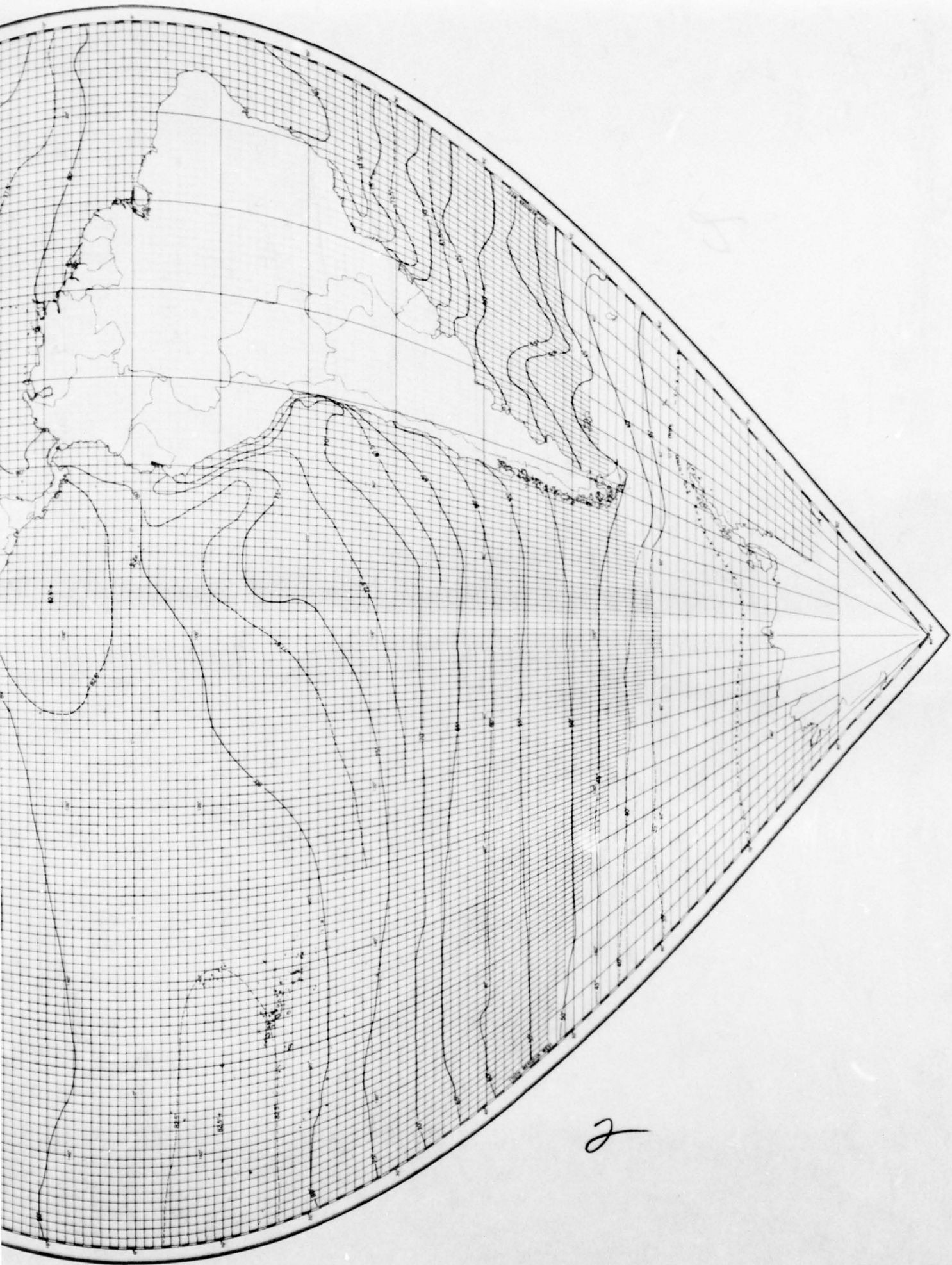
Scale 1:1,000,000

LEGEND  
TEMPERATURES  
--- OBSERVED TEMPERATURES  
--- INTERPOLATED TEMPERATURES  
--- INTERPOLATED MEAN TEMPERATURES  
ICE LIMITS  
--- OBSERVED  
--- INTERPOLATED  
--- INTERPOLATED MEAN ICE LIMIT

Compiled by the Hydrographic Department for the  
U.S. Navy and the U.S. Coast and Geodetic Survey  
Graphic Office and Hydrographic Office







2



SEA SURFACE TEMPERATURE CHART

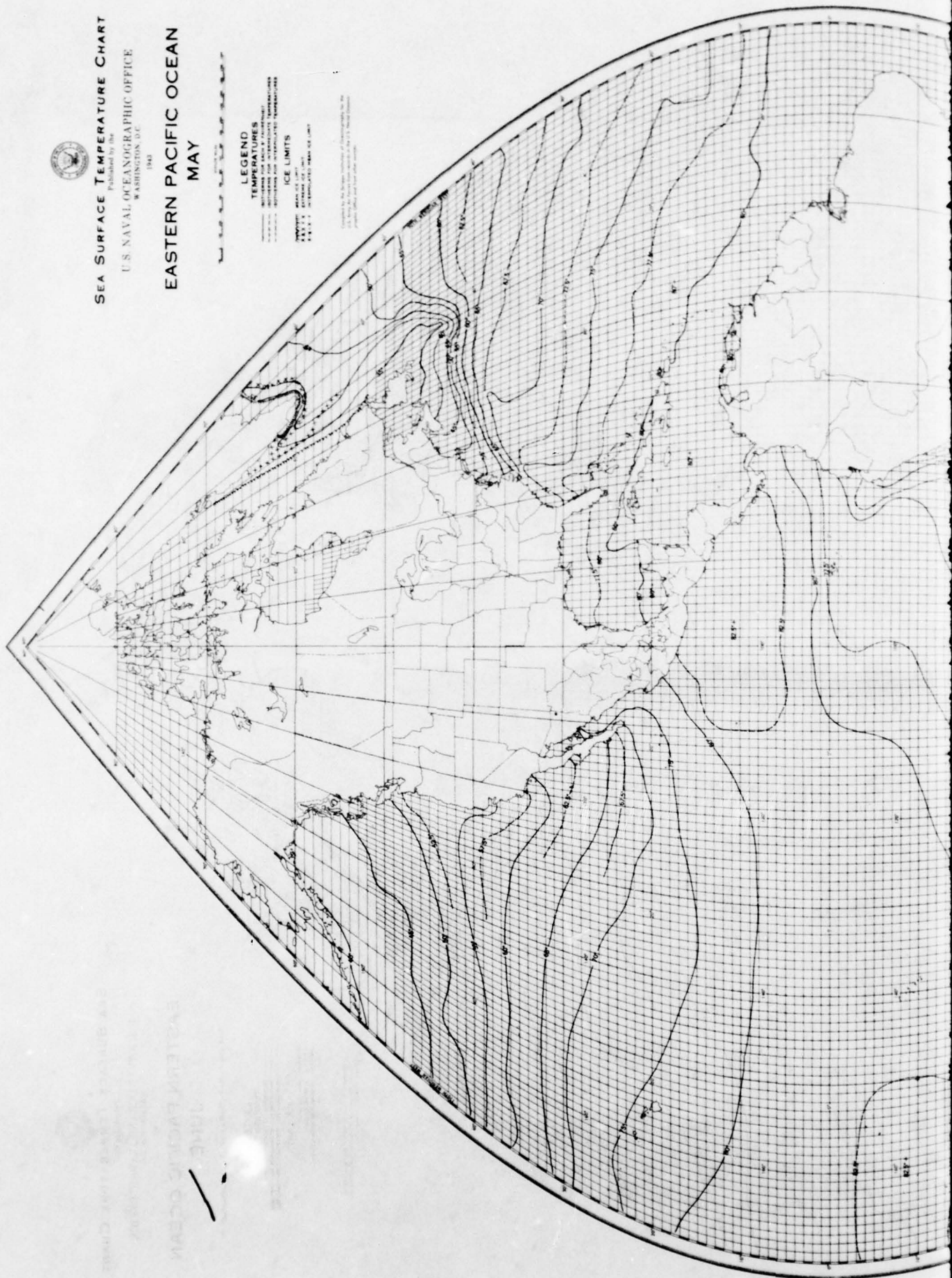
Published by the  
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WASHINGTON, D.C.  
1943

EASTERN PACIFIC OCEAN  
MAY

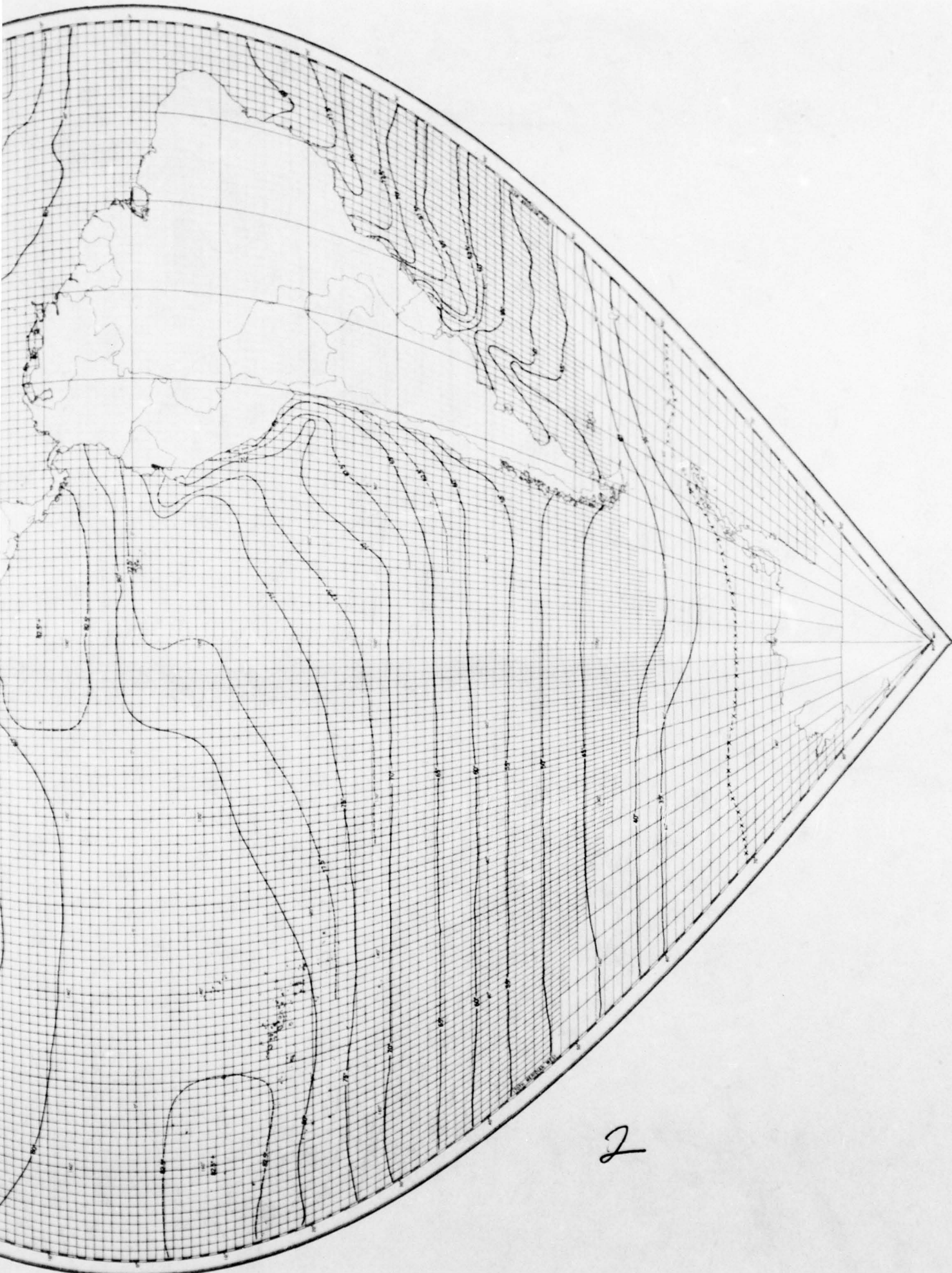
LEGEND

TEMPERATURES  
Isobars for each 1° Fahrenheit  
Isobars for each 0.5° Fahrenheit  
Isobars for each 0.2° Fahrenheit  
ICE LIMITS  
Mean Ice Limit  
Maximum Ice Limit  
Minimum Ice Limit  
Isobars for each 1° Fahrenheit  
Isobars for each 0.5° Fahrenheit  
Isobars for each 0.2° Fahrenheit

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2



SEA SURFACE TEMPERATURE CHART  
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WASHINGTON, D.C.

1942  
EASTERN PACIFIC OCEAN  
JUNE

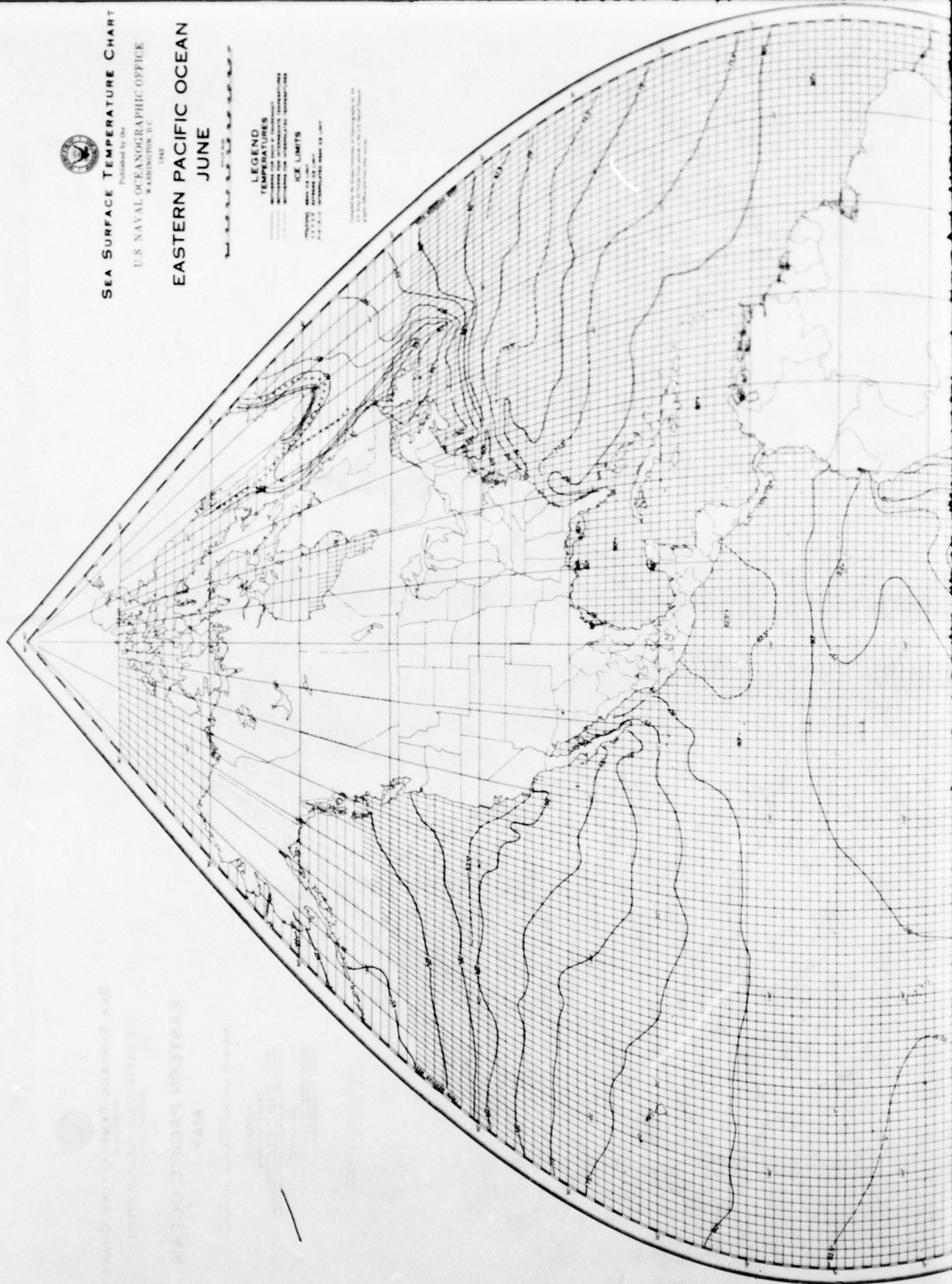
LEGEND

TEMPERATURES  
SURFACE TEMPERATURES  
SURFACE AND INTERMEDIATE TEMPERATURES  
SURFACE AND INTERMEDIATE TEMPERATURES

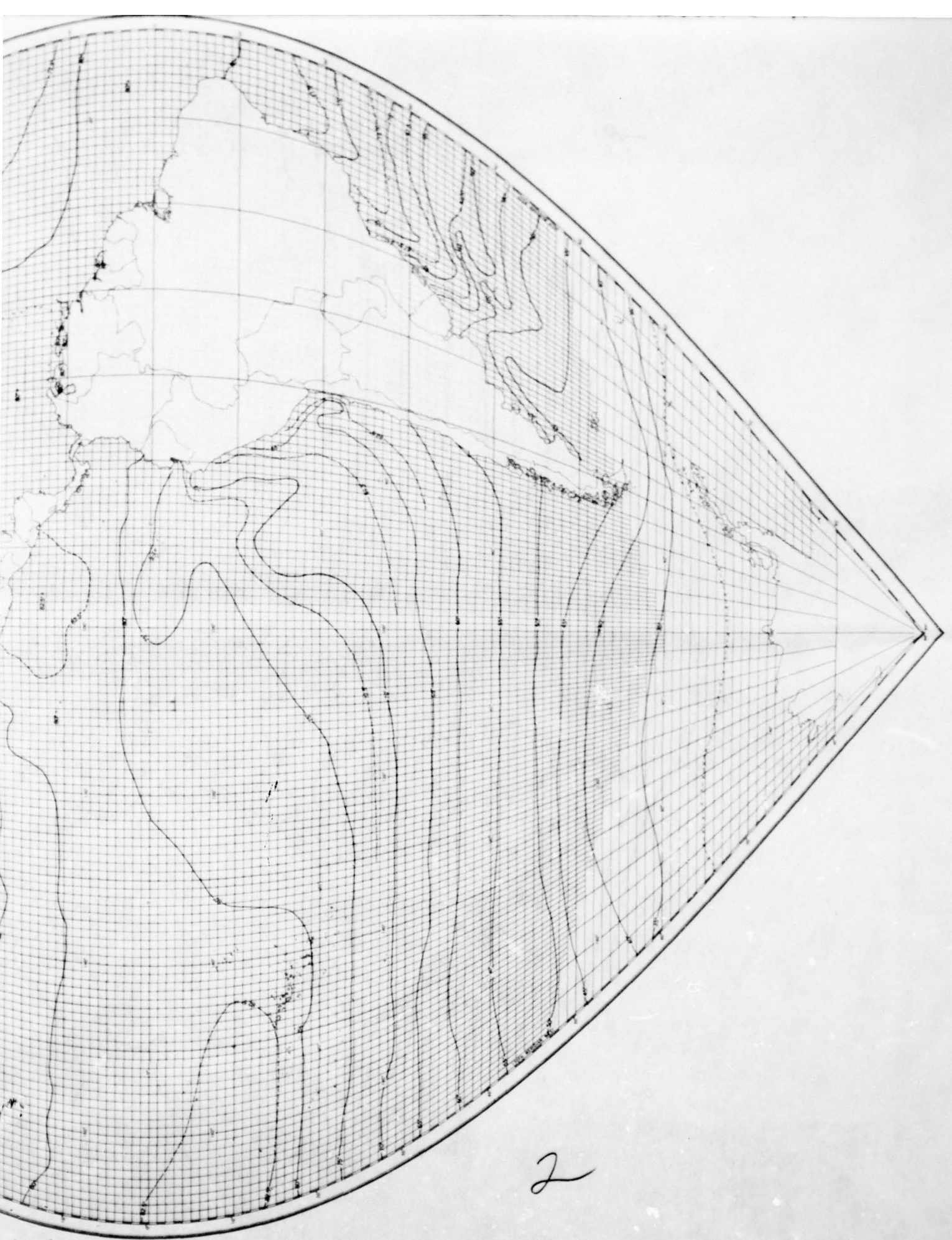
ICE LIMITS

ICE LIMITS  
ICE LIMITS  
ICE LIMITS

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Mr. Alabaud by letter.

U.S. NAVAL OCEANOGRAPHIC OFFICE

3

EASTERN PACIFIC OCEAN  
JULY



LEGEND

LEADING  
SUPERATUNES

## TEMPERATURES

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**Author's address:** Department of Psychology, University of Illinois at Chicago, 608 S. Morgan St., Chicago, IL 60607-7199, USA.  
E-mail: [shawn.walker@uic.edu](mailto:shawn.walker@uic.edu)

### PRICE LIMITS

**Abstract**

Author	Year	Country	Sample Size	Study Design	Findings
Smith et al.	2005	USA	1,200	Longitudinal	Increased risk of depression in children of parents with MDD.
Johnson et al.	2007	UK	800	Cross-sectional	Maternal MDD associated with child behavioral problems.
Lee et al.	2009	Canada	1,500	Longitudinal	Paternal MDD linked to child academic performance.
Wong et al.	2011	Australia	900	Cross-sectional	Family MDD history predicts child mental health.
Chen et al.	2013	China	2,100	Longitudinal	Maternal MDD associated with child cognitive development.
Miller et al.	2015	USA	1,800	Cross-sectional	Paternal MDD linked to child social skills.
Nguyen et al.	2017	Vietnam	1,100	Longitudinal	Family MDD history predicts child mental health.
Kim et al.	2019	South Korea	1,300	Cross-sectional	Maternal MDD associated with child emotional problems.
Patel et al.	2021	India	1,600	Longitudinal	Paternal MDD linked to child academic performance.
Roberts et al.	2023	USA	1,400	Cross-sectional	Family MDD history predicts child mental health.

provided by the Bureau of Census of the Department of Commerce.

Figure 1. The effect of the concentration of the polymer on the gelation time.



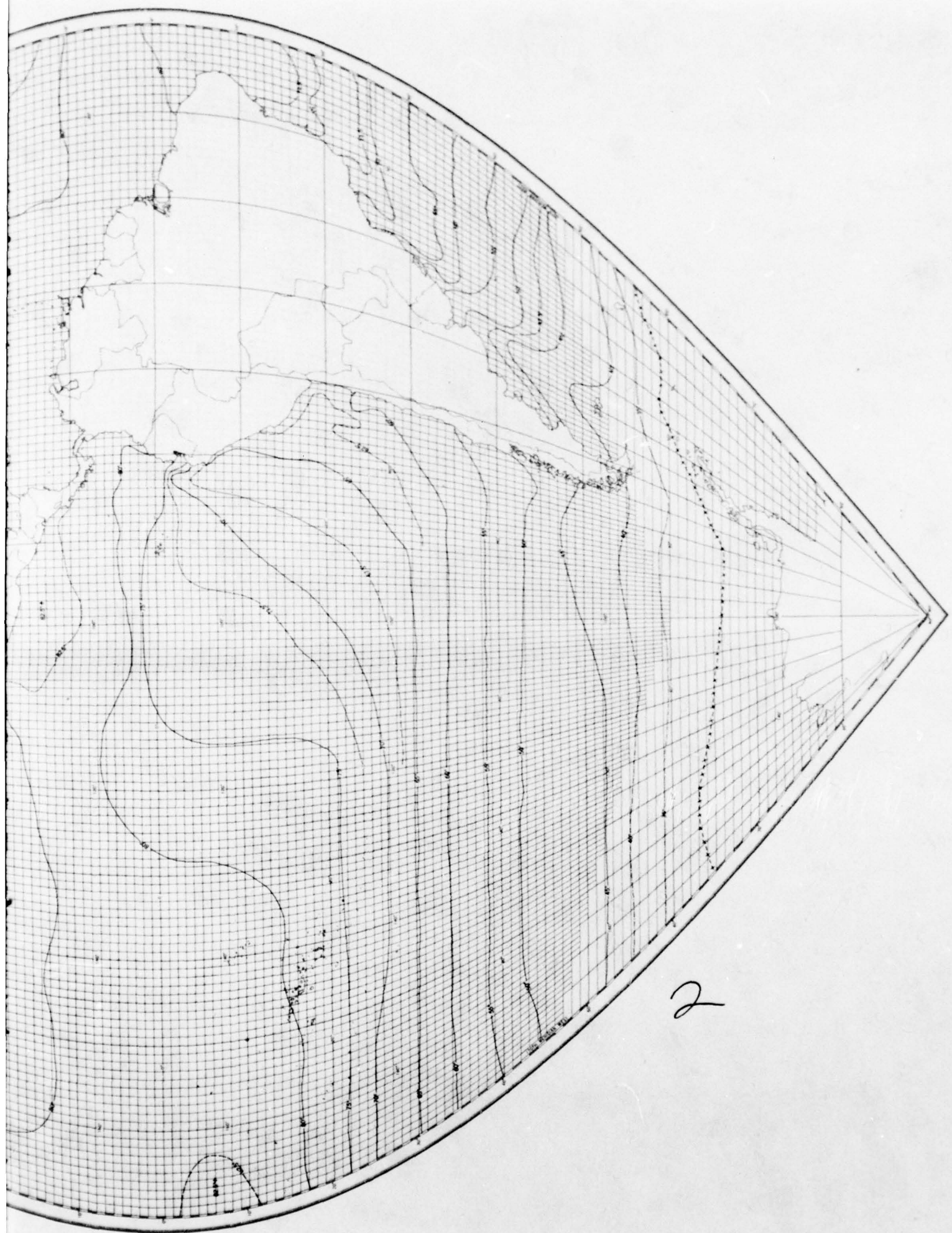




Fig. 6. Effect of time on the...

U.S. NAVAL OCEANOGRAPHIC OFFICE  
WASHINGTON, D.C.

3

EASTERN PACIFIC OCEAN  
AUGUST

LEGEND  
MPE DATA POINTS

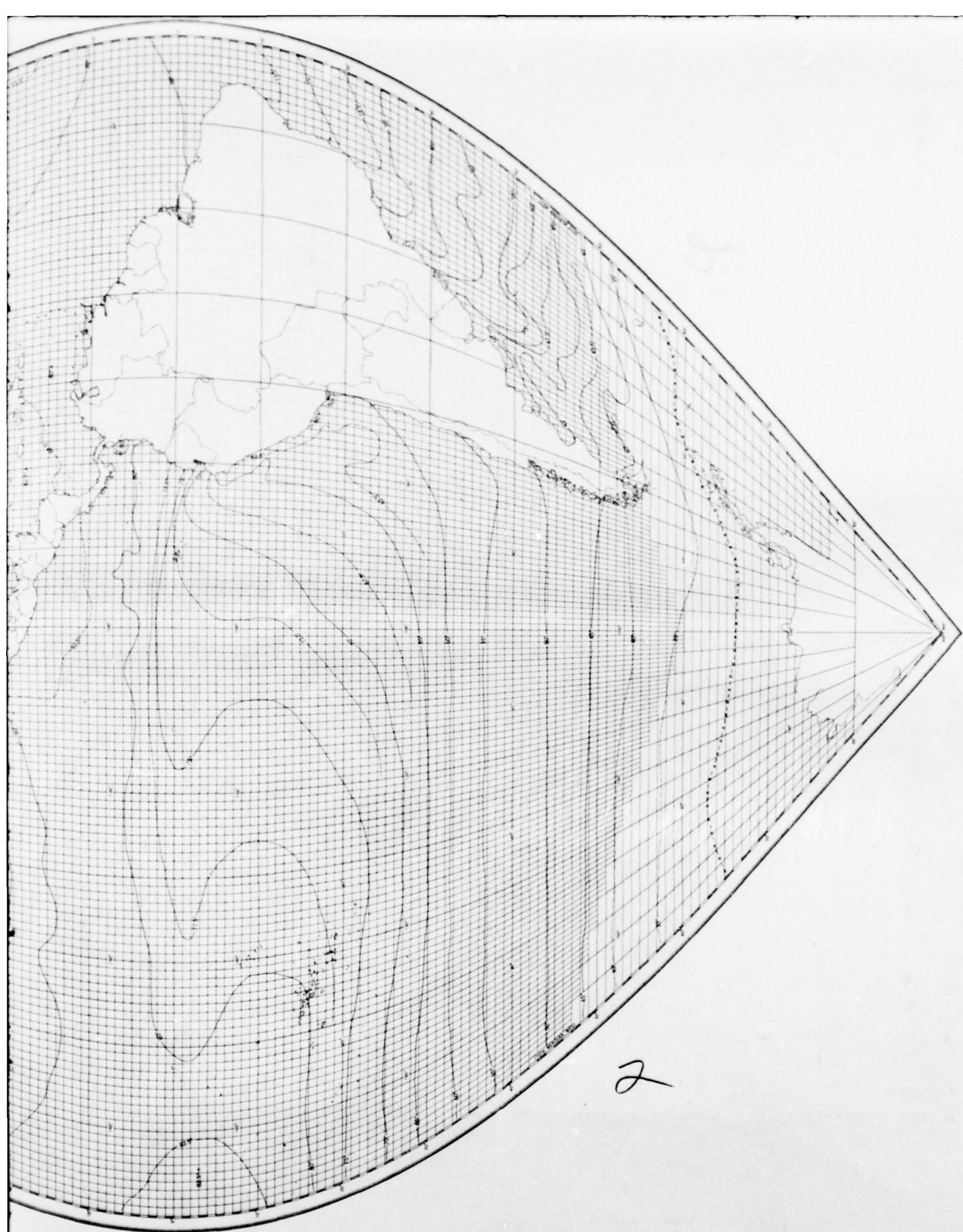
**THE MPE DATA UPDATE**

## NEW LISTINGS

[illegible]

Completed by the former students of Geography in the  
1930s, the book is now a rare find in the library of the  
University of Cambridge.







# SEA SURFACE TEMPERATURE CHART

Published by the

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WASHINGTON, D.C.

1943

## EASTERN PACIFIC OCEAN SEPTEMBER



### LEGEND

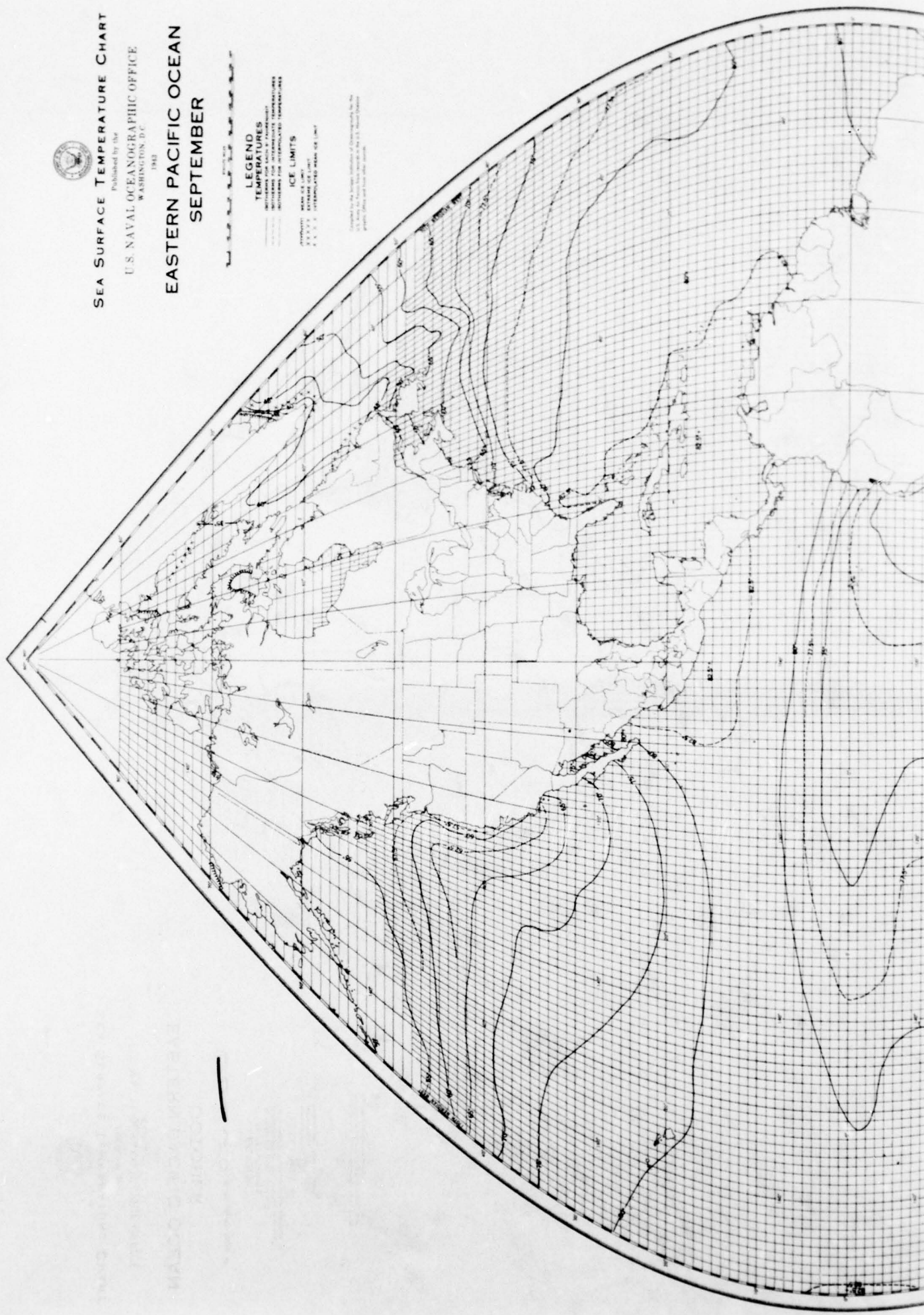
#### TEMPERATURES

— OBSERVED TEMPERATURES  
--- INTERPOLATED TEMPERATURES  
--- MEAN TEMPERATURES

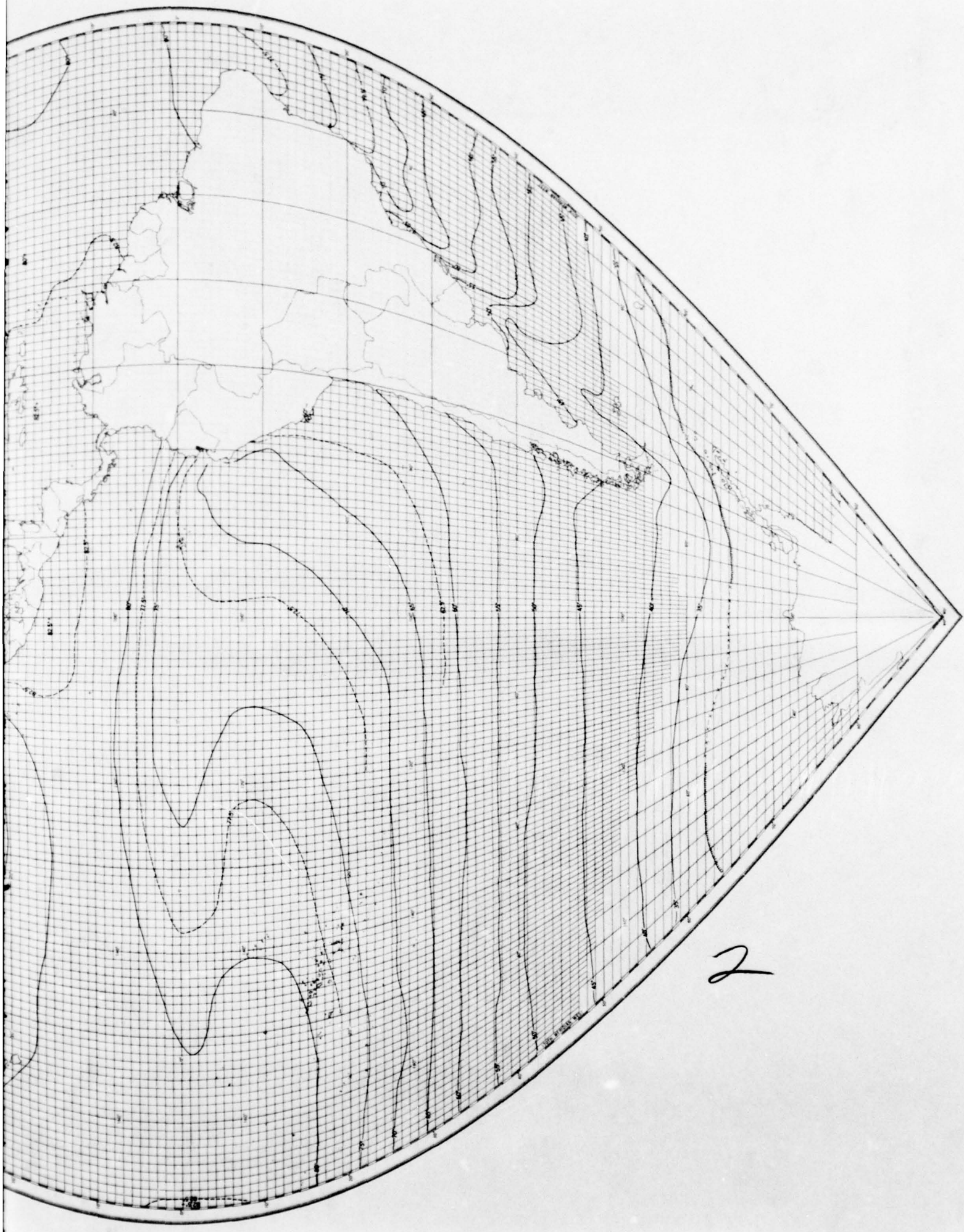
#### ICE LIMITS

— MEAN ICE LIMIT  
--- MAXIMUM ICE LIMIT  
--- MINIMUM ICE LIMIT  
--- INTERPOLATED MEAN ICE LIMIT

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EASTERN PACIFIC OCEAN  
OCTOBER

Figure 10.11

### LEGEND

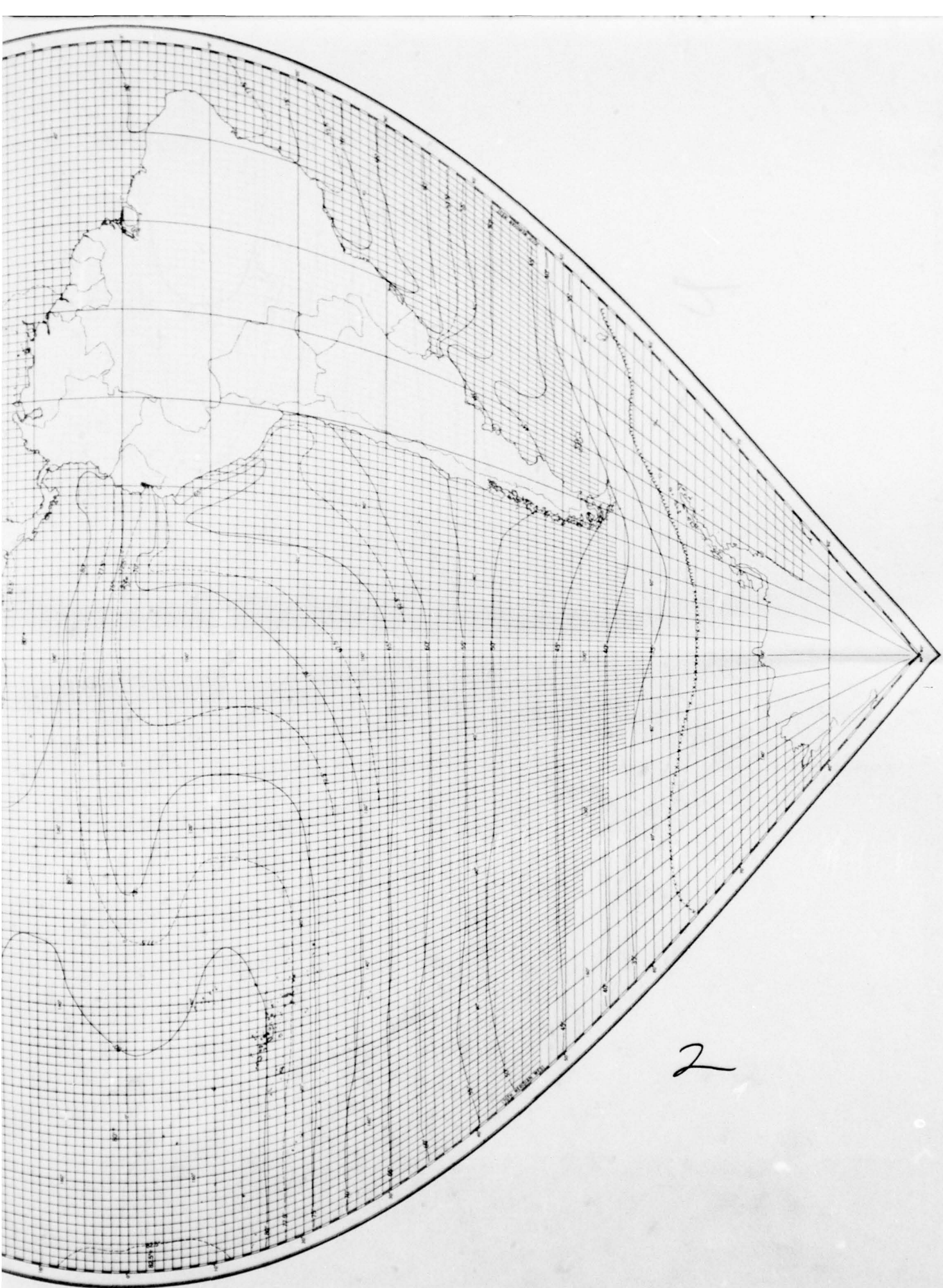
**LEGEND**  
TEMPERATURES  
daytime from 6:00 to 18:00 hours  
nighttime from 18:00 to 6:00 hours  
all day from 6:00 to 6:00 hours

## ICE LIMITS

[illegible]

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2



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1943

EASTERN PACIFIC OCEAN  
NOVEMBER



LEGEND

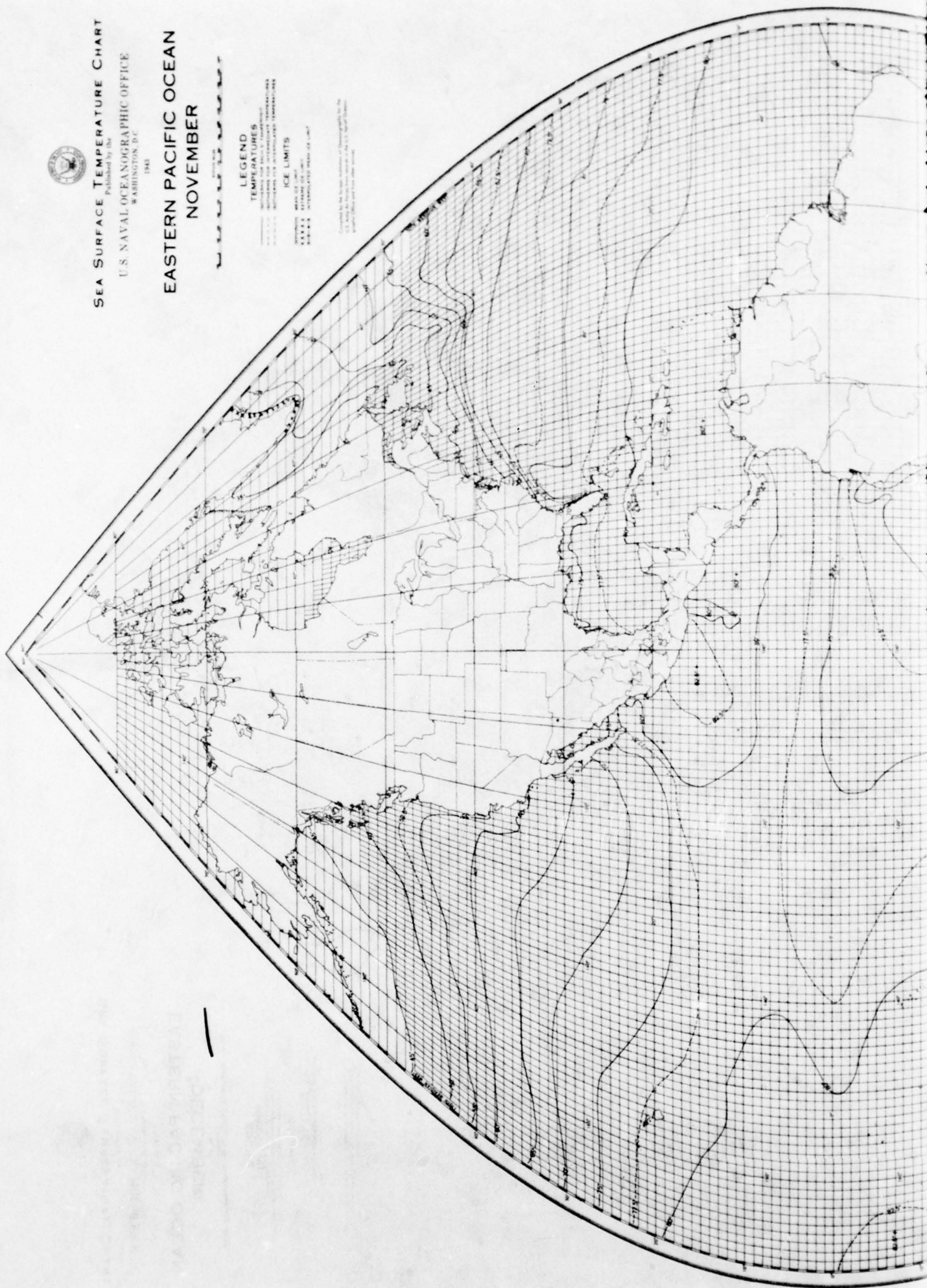
TEMPERATURES

— 100 F. (37.8 C.)  
— 90 F. (32.2 C.)  
— 80 F. (26.7 C.)  
— 70 F. (21.1 C.)  
— 60 F. (15.6 C.)  
— 50 F. (10.0 C.)  
— 40 F. (4.4 C.)  
— 30 F. (-1.1 C.)  
— 20 F. (-6.7 C.)  
— 10 F. (-12.2 C.)  
— 0 F. (-17.8 C.)  
— -10 F. (-23.3 C.)  
— -20 F. (-28.9 C.)  
— -30 F. (-33.3 C.)  
— -40 F. (-40.0 C.)  
— -50 F. (-45.6 C.)  
— -60 F. (-51.1 C.)  
— -70 F. (-56.7 C.)  
— -80 F. (-62.2 C.)  
— -90 F. (-67.8 C.)  
— -100 F. (-73.3 C.)

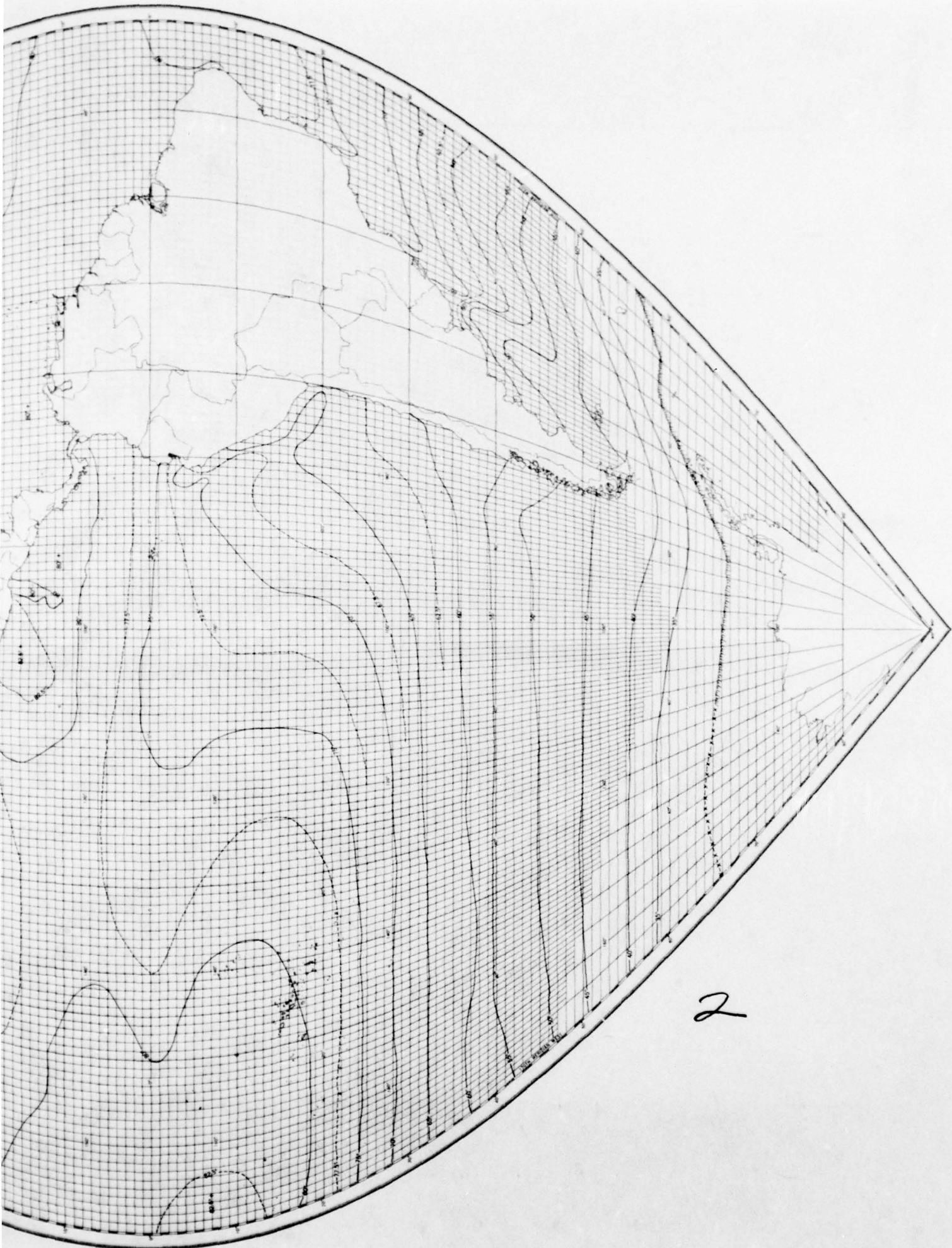
ICE LIMITS

— 100% ICE  
— 90% ICE  
— 80% ICE  
— 70% ICE  
— 60% ICE  
— 50% ICE  
— 40% ICE  
— 30% ICE  
— 20% ICE  
— 10% ICE  
— 0% ICE

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2



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EASTERN PACIFIC OCEAN  
DECEMBER

LEGEND  
TEMPERATURES

**TEMPERATURE 5**

Applying only with liquid by casting method.

Application only with spray method. (Apply 10-15 g/m<sup>2</sup>)

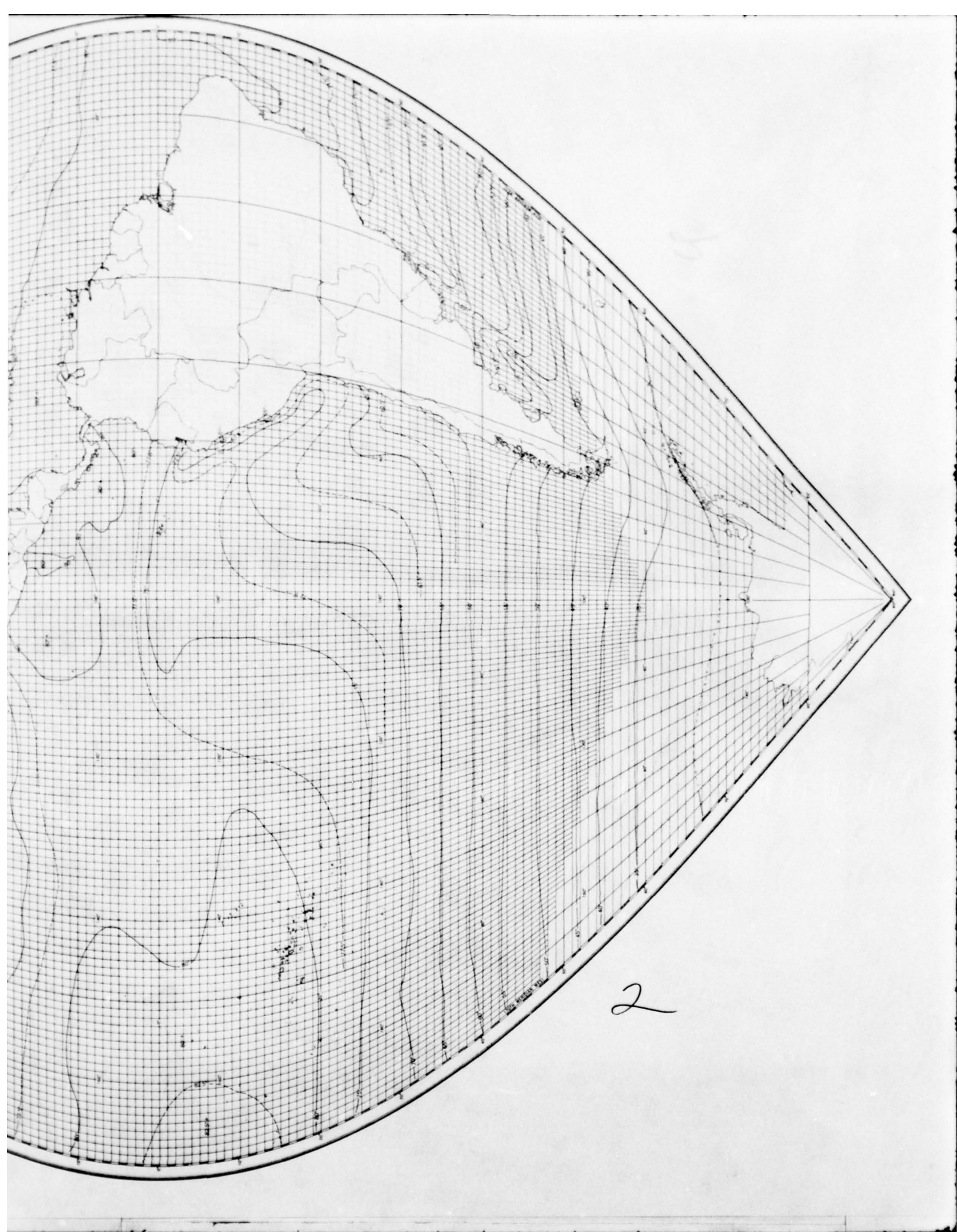
Application only with brush method. (Apply 10-15 g/m<sup>2</sup>)

ICE LIMITS

Received 10 May 2006; accepted 10 May 2006

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SEA SURFACE TEMPERATURE CHART

Published by the

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1943

WESTERN PACIFIC OCEAN  
JANUARY



LEGEND

TEMPERATURES

— SURFACE TEMPERATURE (1000 METERS)  
— SURFACE TEMPERATURE (2000 METERS)  
— SURFACE TEMPERATURE (3000 METERS)

ICE

ARCTIC

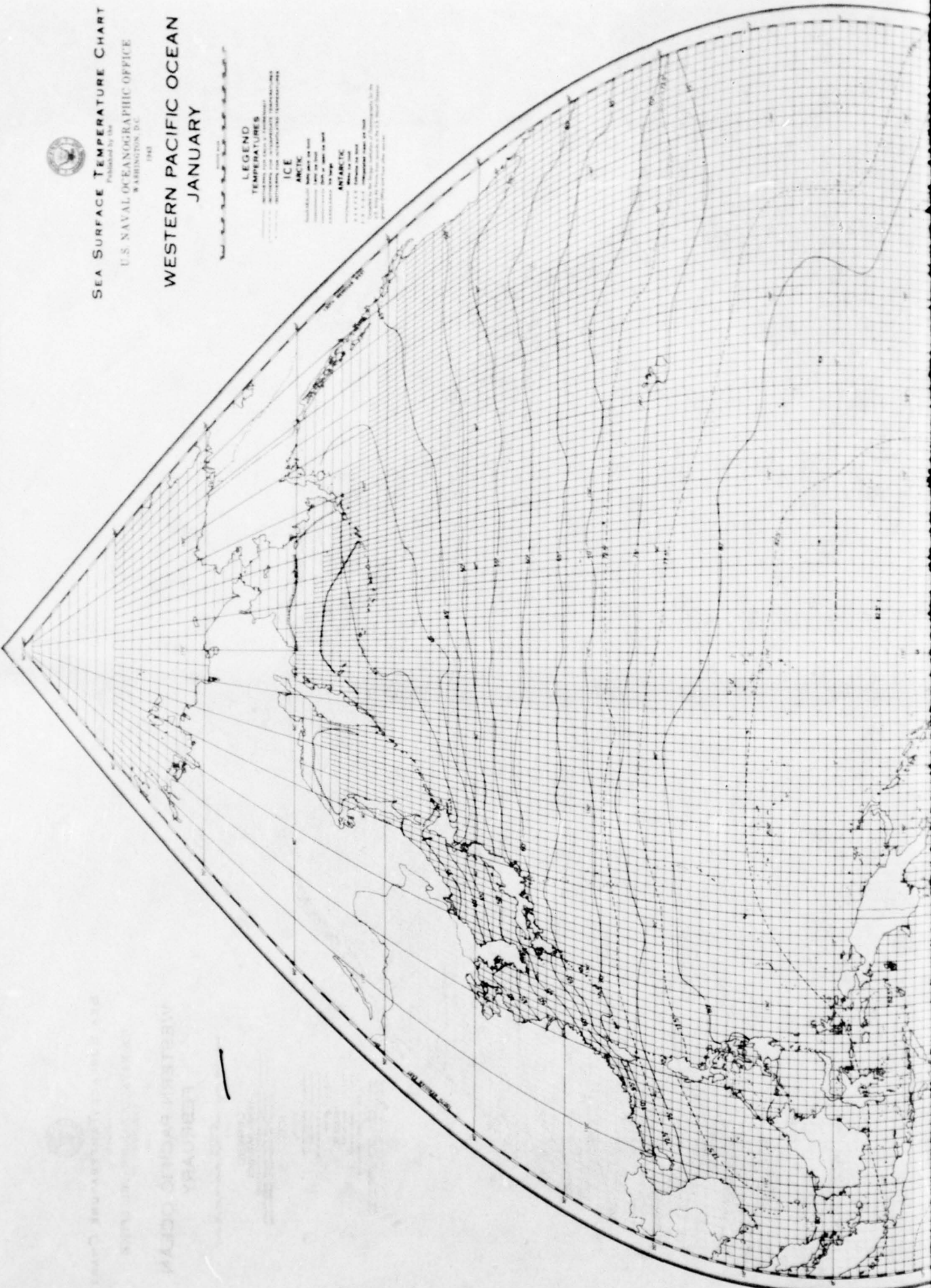
— SEA ICE  
— LAND ICE  
— ICEBERG

ARCTIC

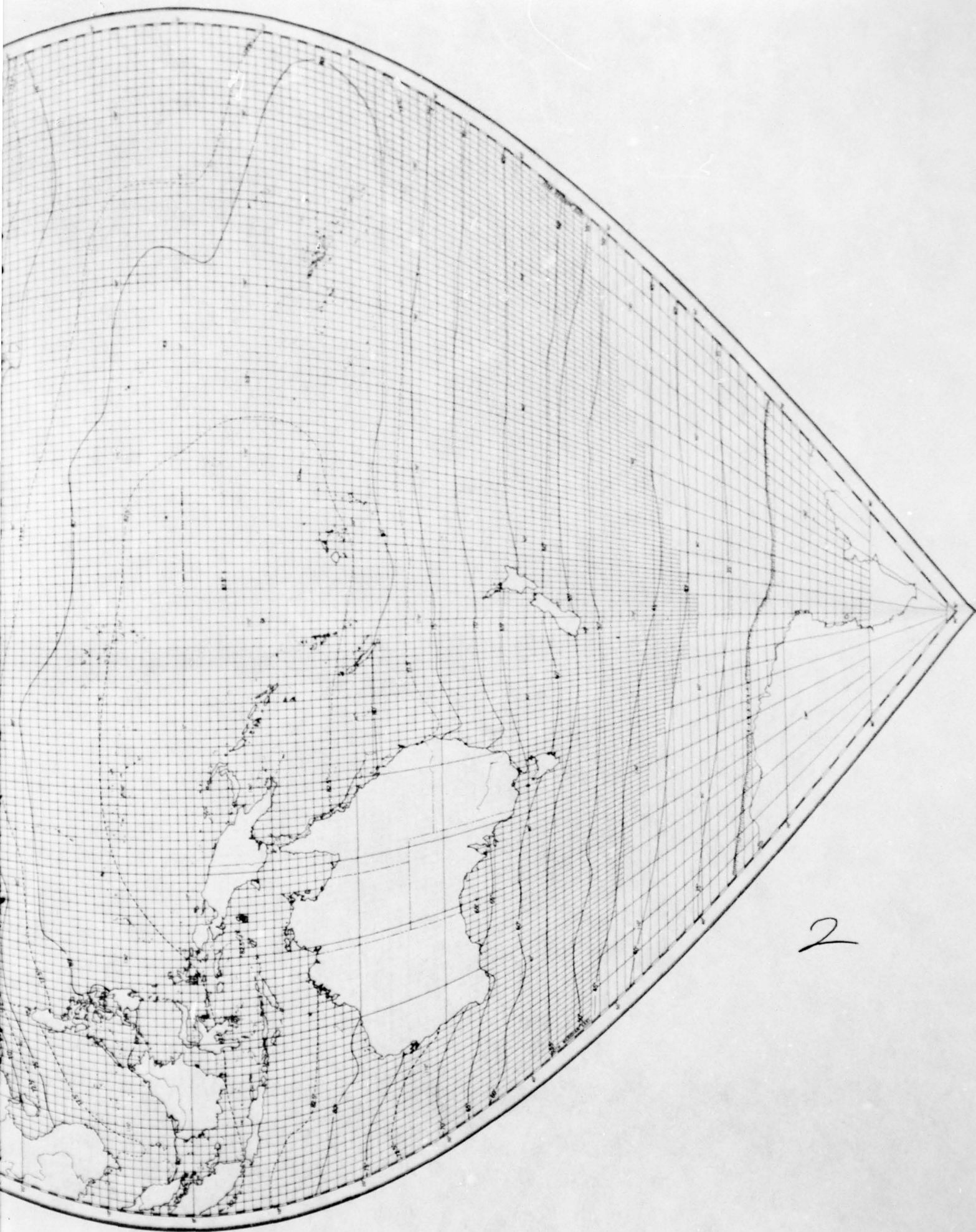
— SEA ICE  
— LAND ICE  
— ICEBERG

— SURFACE TEMPERATURE (1000 METERS)  
— SURFACE TEMPERATURE (2000 METERS)  
— SURFACE TEMPERATURE (3000 METERS)

U.S. NAVAL OCEANOGRAPHIC OFFICE, WASHINGTON, D.C.



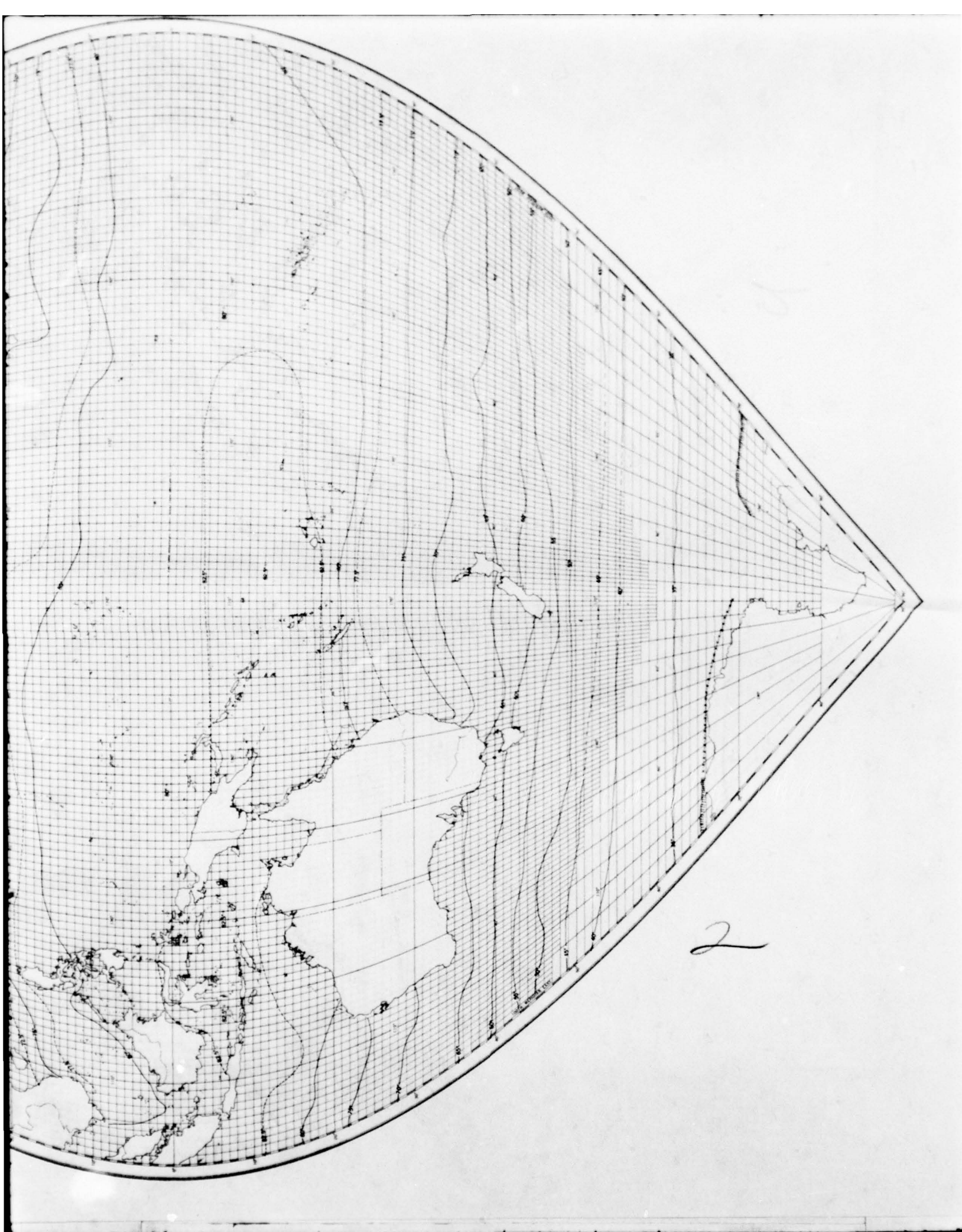




2









SEA SURFACE TEMPERATURE CHART  
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1947

WESTERN PACIFIC OCEAN  
MARCH



LEGEND  
TEMPERATURES

— OBSERVED SURFACE TEMPERATURES  
— OBSERVED SURFACE TEMPERATURES  
— OBSERVED SURFACE TEMPERATURES

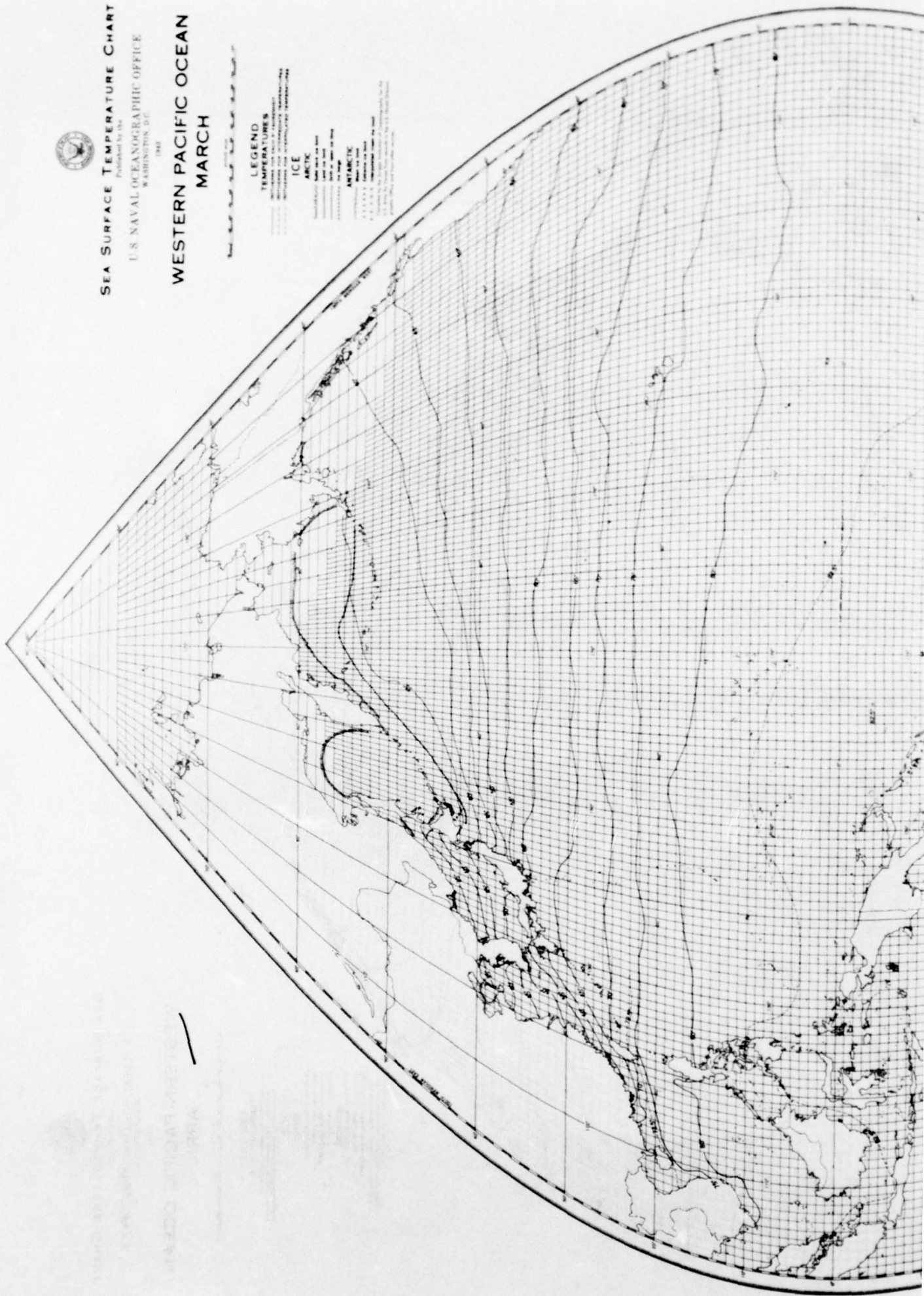
ICE

ARCTIC

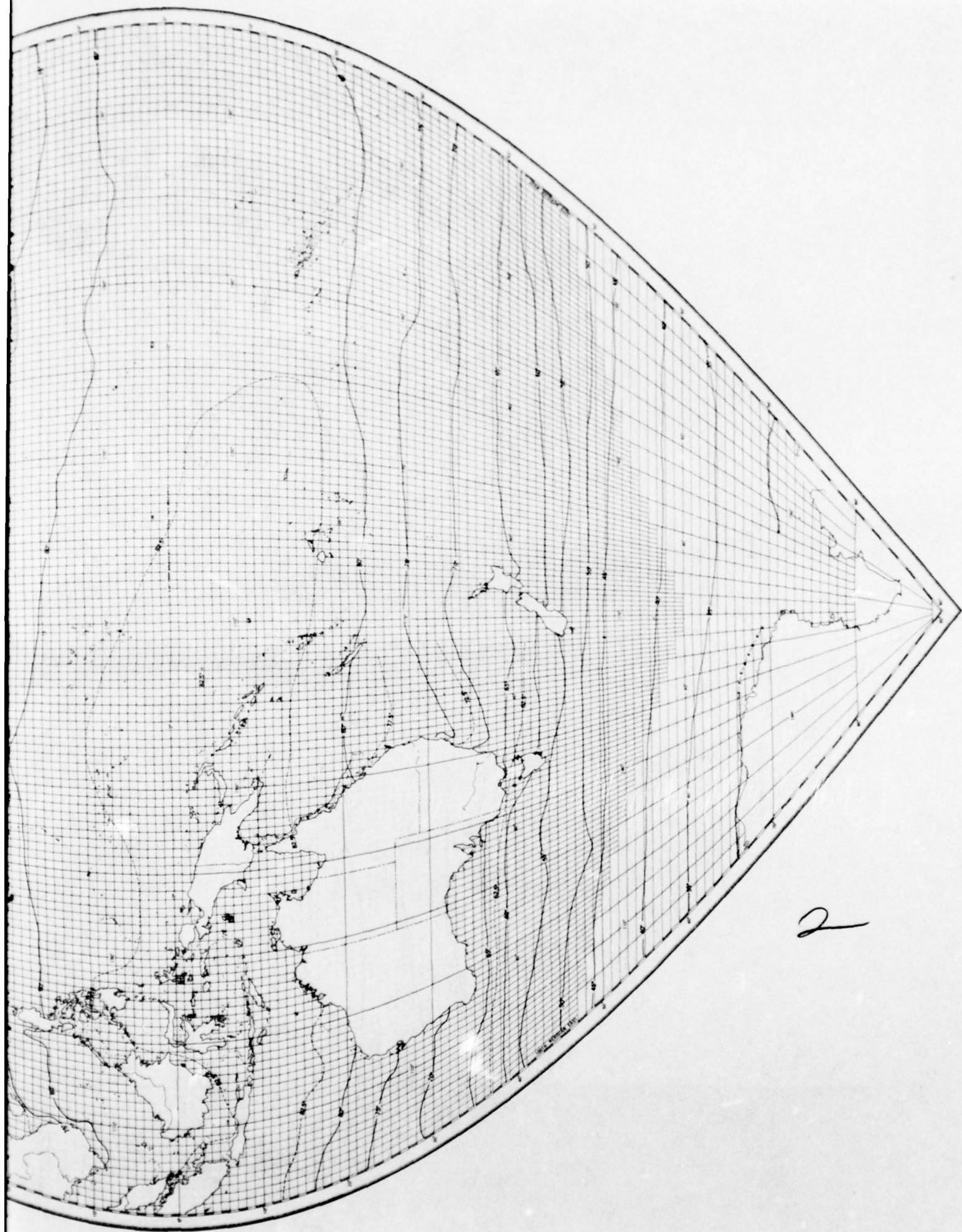
— OBSERVED SURFACE TEMPERATURES  
— OBSERVED SURFACE TEMPERATURES  
— OBSERVED SURFACE TEMPERATURES

ANTARCTIC

— OBSERVED SURFACE TEMPERATURES  
— OBSERVED SURFACE TEMPERATURES  
— OBSERVED SURFACE TEMPERATURES







2



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1943

WESTERN PACIFIC OCEAN  
APRIL



LEGEND  
TEMPERATURES  
— SURFACE TEMPERATURES  
--- INTERPOLATED TEMPERATURES

ICE

ARCTIC

— SURFACE TEMPERATURES

--- INTERPOLATED TEMPERATURES

— SURFACE TEMPERATURES

--- INTERPOLATED TEMPERATURES

— SURFACE TEMPERATURES

--- INTERPOLATED TEMPERATURES

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— SURFACE TEMPERATURES

--- INTERPOLATED TEMPERATURES

ANTARCTIC

— SURFACE TEMPERATURES

--- INTERPOLATED TEMPERATURES

— SURFACE TEMPERATURES

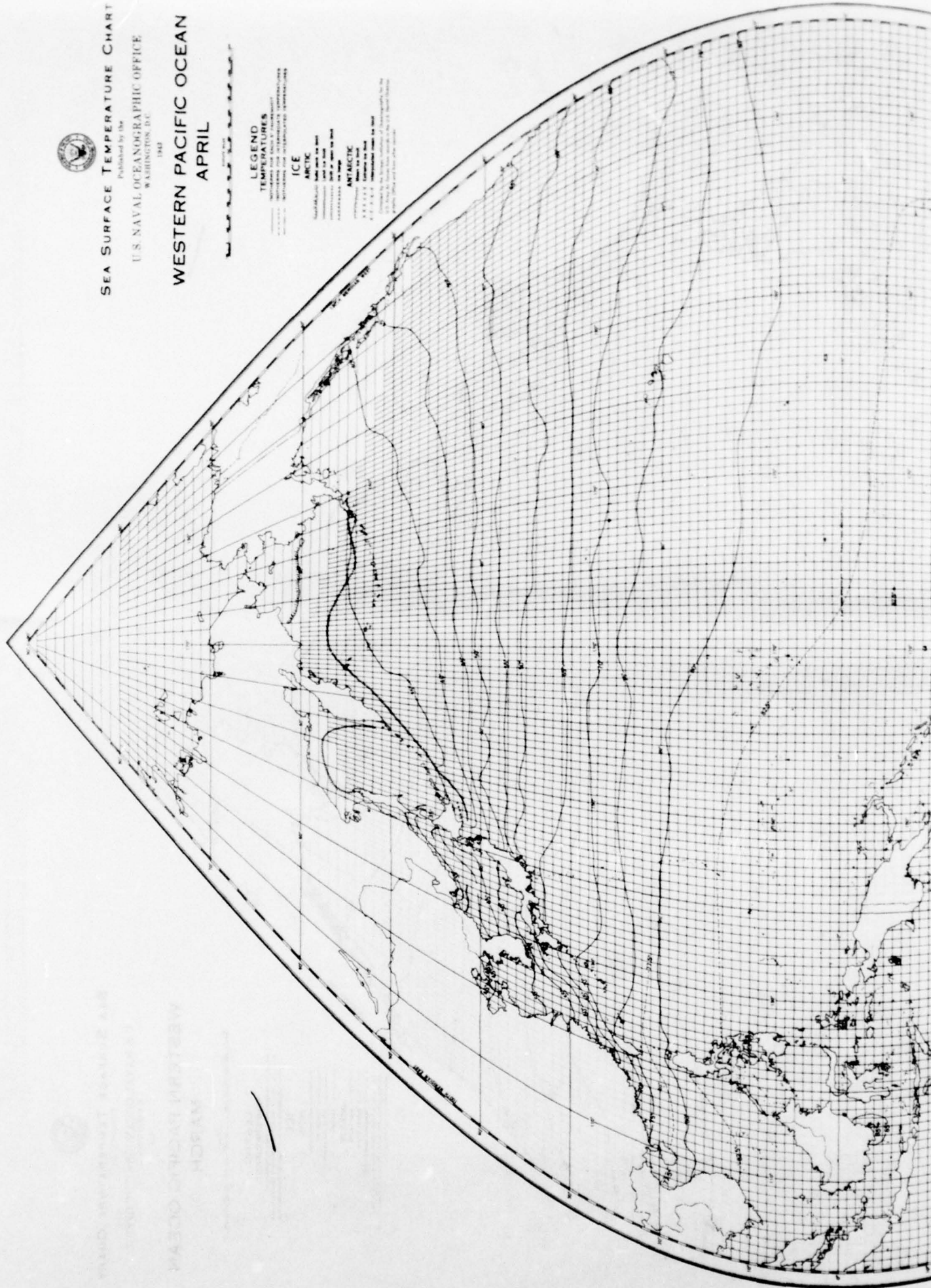
--- INTERPOLATED TEMPERATURES

— SURFACE TEMPERATURES

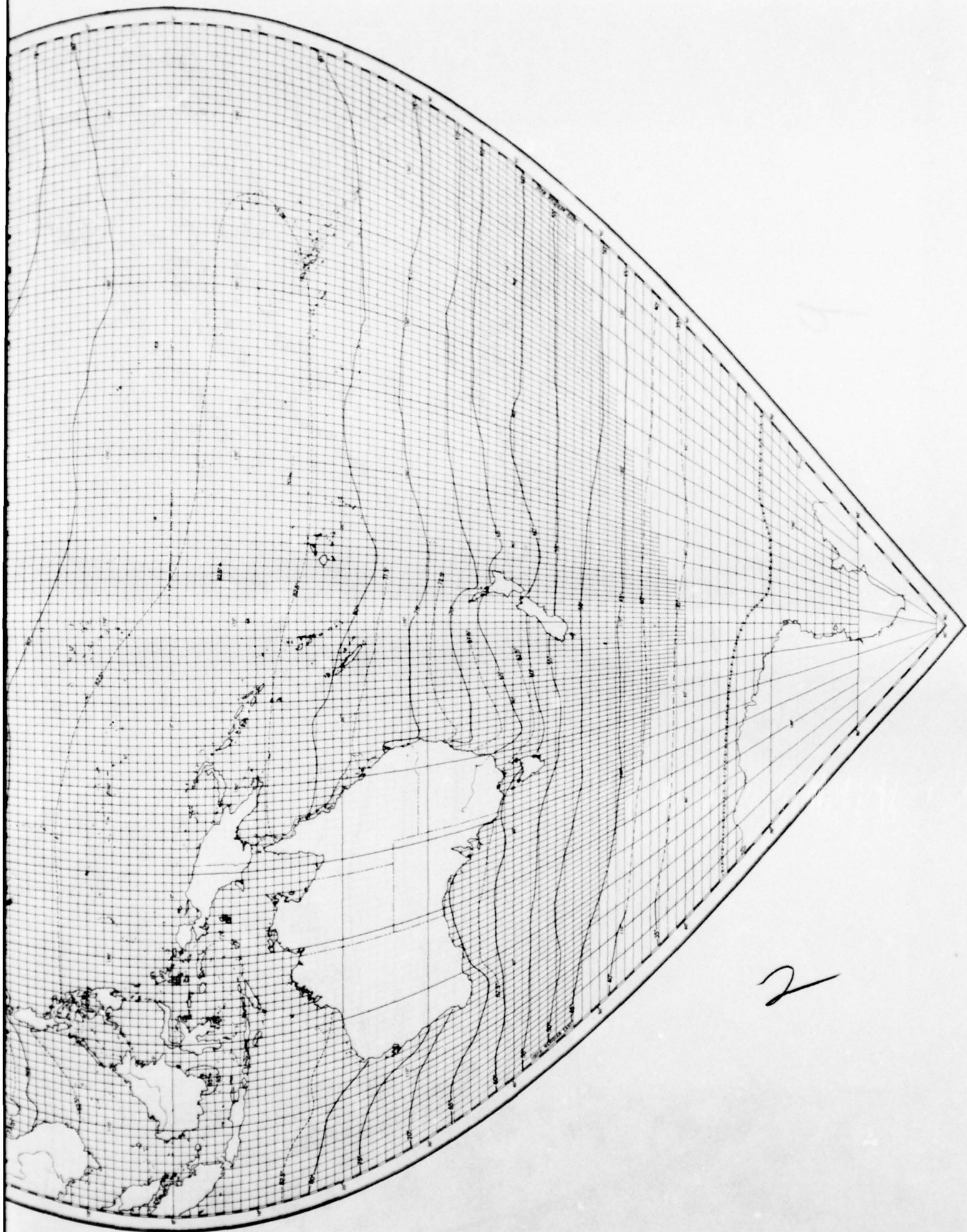
--- INTERPOLATED TEMPERATURES

— SURFACE TEMPERATURES

--- INTERPOLATED TEMPERATURES







2



SEA SURFACE TEMPERATURE CHART

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WASHINGTON, D.C.

1943

WESTERN PACIFIC OCEAN

MAY



LEGEND

TEMPERATURES

Isobars for 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000, 1010, 1020, 1030, 1040, 1050, 1060, 1070, 1080, 1090, 1100, 1110, 1120, 1130, 1140, 1150, 1160, 1170, 1180, 1190, 1200, 1210, 1220, 1230, 1240, 1250, 1260, 1270, 1280, 1290, 1300, 1310, 1320, 1330, 1340, 1350, 1360, 1370, 1380, 1390, 1400, 1410, 1420, 1430, 1440, 1450, 1460, 1470, 1480, 1490, 1500, 1510, 1520, 1530, 1540, 1550, 1560, 1570, 1580, 1590, 1600, 1610, 1620, 1630, 1640, 1650, 1660, 1670, 1680, 1690, 1700, 1710, 1720, 1730, 1740, 1750, 1760, 1770, 1780, 1790, 1800, 1810, 1820, 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ICE

ARCTIC

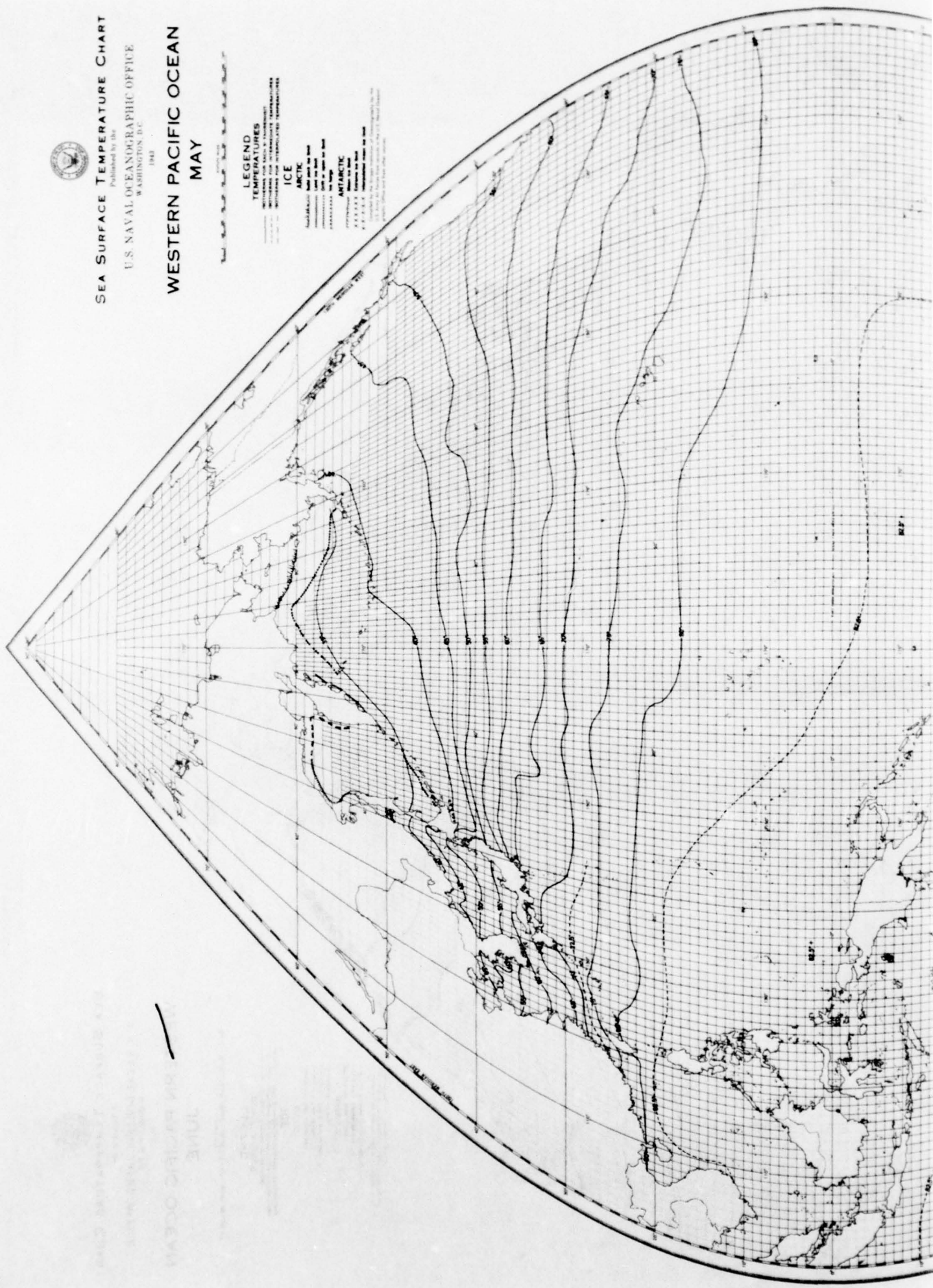
Icebergs from the Arctic  
Icebergs from the Antarctic  
Icebergs from the Pacific  
Icebergs from the Atlantic  
Icebergs from the Indian Ocean  
Icebergs from the Southern Ocean

ANTARCTIC

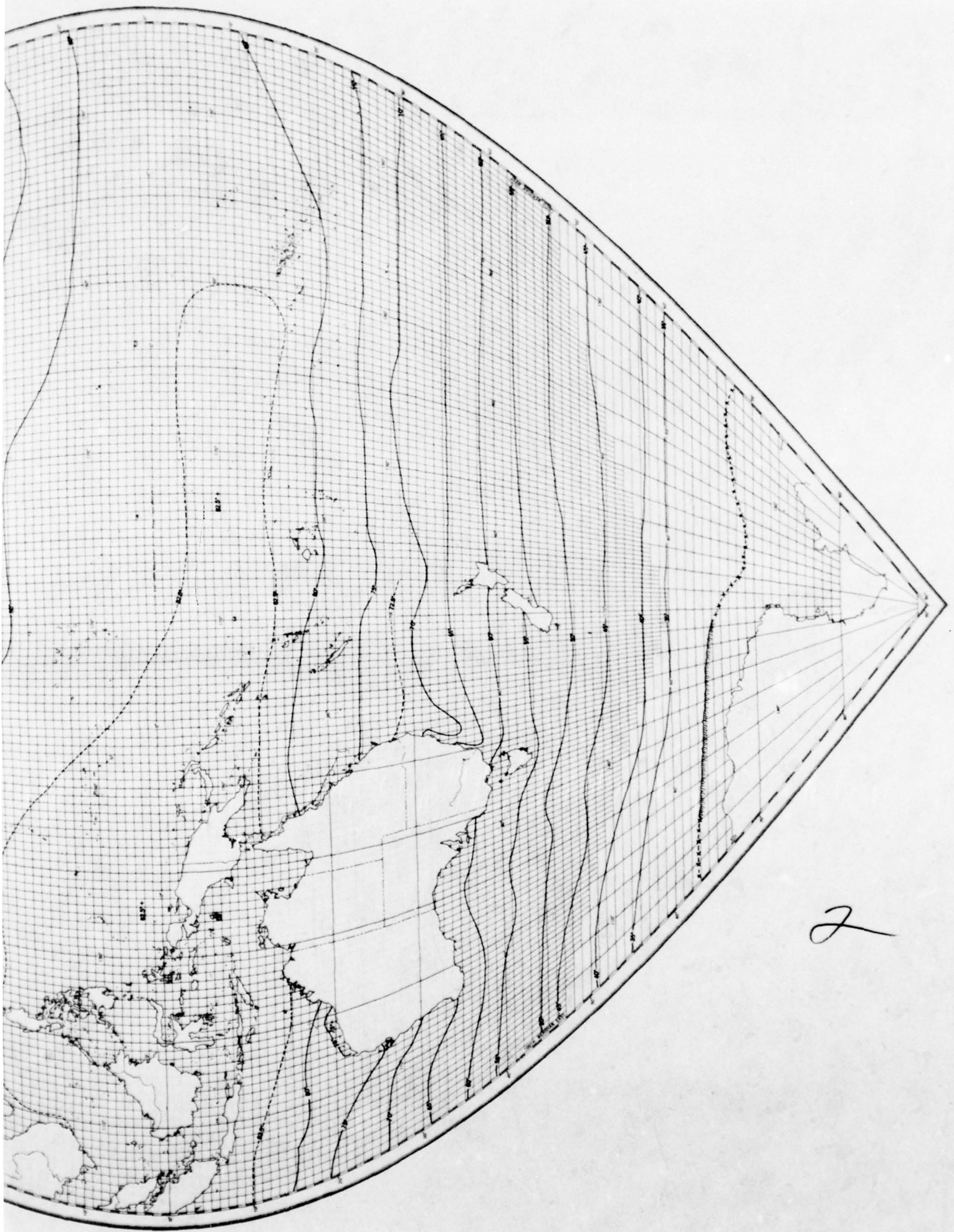
Icebergs from the Antarctic  
Icebergs from the Pacific  
Icebergs from the Atlantic  
Icebergs from the Indian Ocean  
Icebergs from the Southern Ocean

Icebergs from the Pacific  
Icebergs from the Atlantic  
Icebergs from the Indian Ocean  
Icebergs from the Southern Ocean

U.S. Navy Hydrographic Office, Washington, D.C.  
Published by the U.S. Naval Oceanographic Office, Washington, D.C.  
1943







2



# SEA SURFACE TEMPERATURE CHART

Published by the

U.S. NAVAL OCEANOGRAPHIC OFFICE  
WASHINGTON, D.C.

1943

## WESTERN PACIFIC OCEAN JUNE



### LEGEND

TEMPERATURES  
INTERPOLATED FROM SURFACE  
OBSERVATIONS AND INTERPOLATED TEMPERATURES

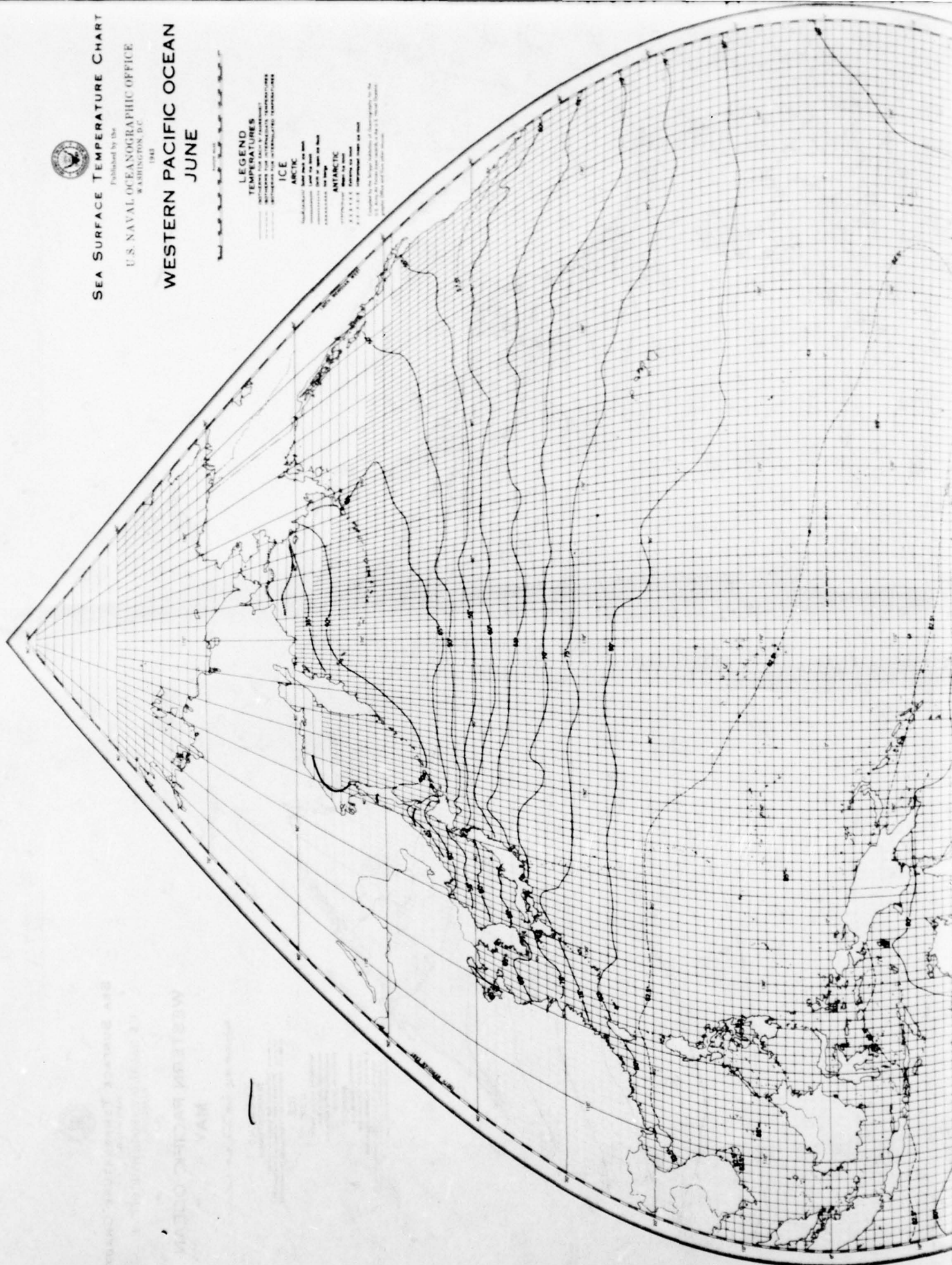
### ICE

ARCTIC  
TEMPERATURES  
INTERPOLATED FROM SURFACE  
OBSERVATIONS AND INTERPOLATED TEMPERATURES

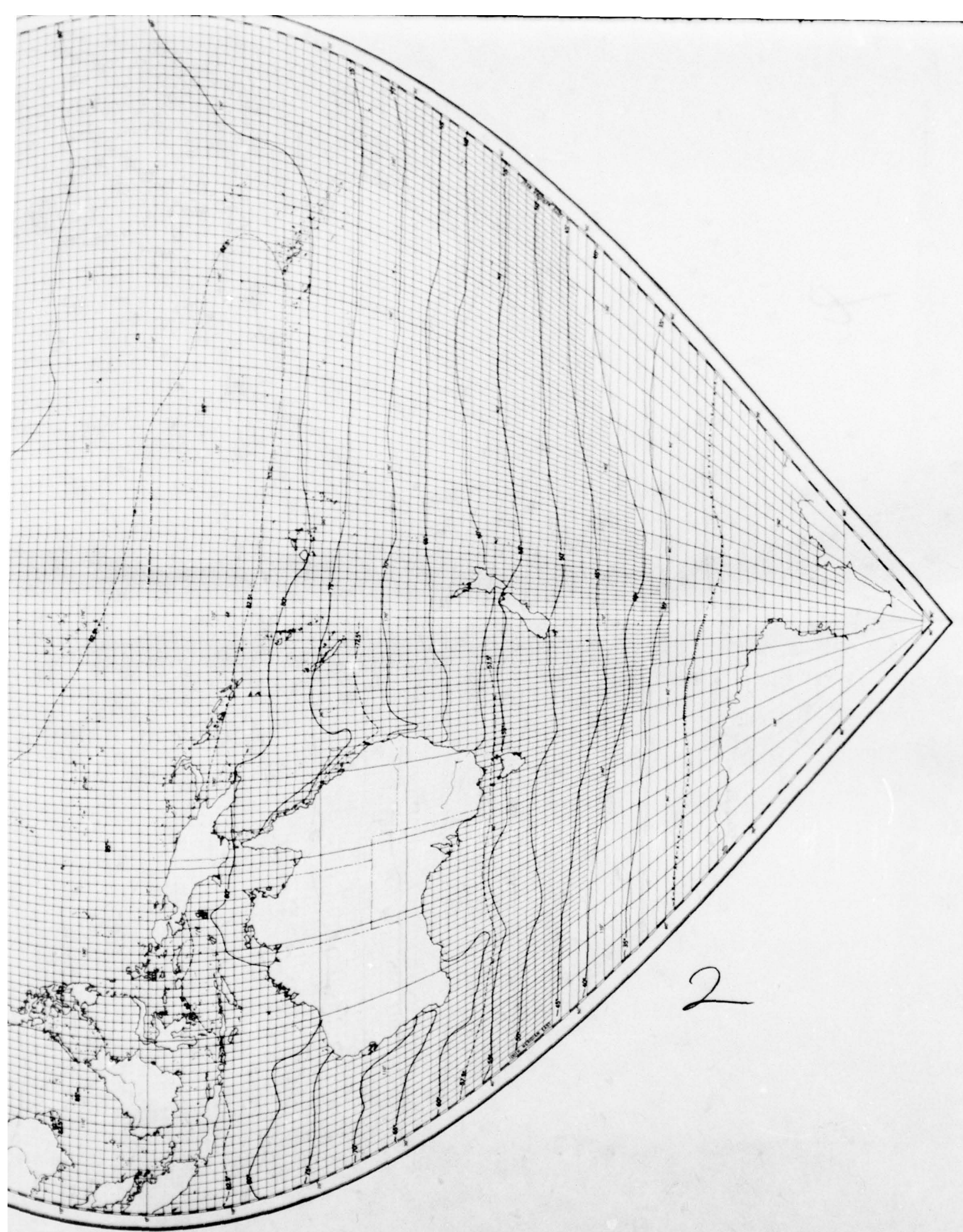
### ANTARCTIC

TEMPERATURES  
INTERPOLATED FROM SURFACE  
OBSERVATIONS AND INTERPOLATED TEMPERATURES

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Revised and corrected to June 1943.









SEA SURFACE TEMPERATURE CHART

Published by the

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WASHINGTON, D.C.

1943

WESTERN PACIFIC OCEAN  
JULY



LEGEND

TEMPERATURES  
ISOTHERMS FOR EACH 2° DEGREE  
INTERVALS AND ISOTHERMS FOR  
INTERVALS OF 1° DEGREE

ICE

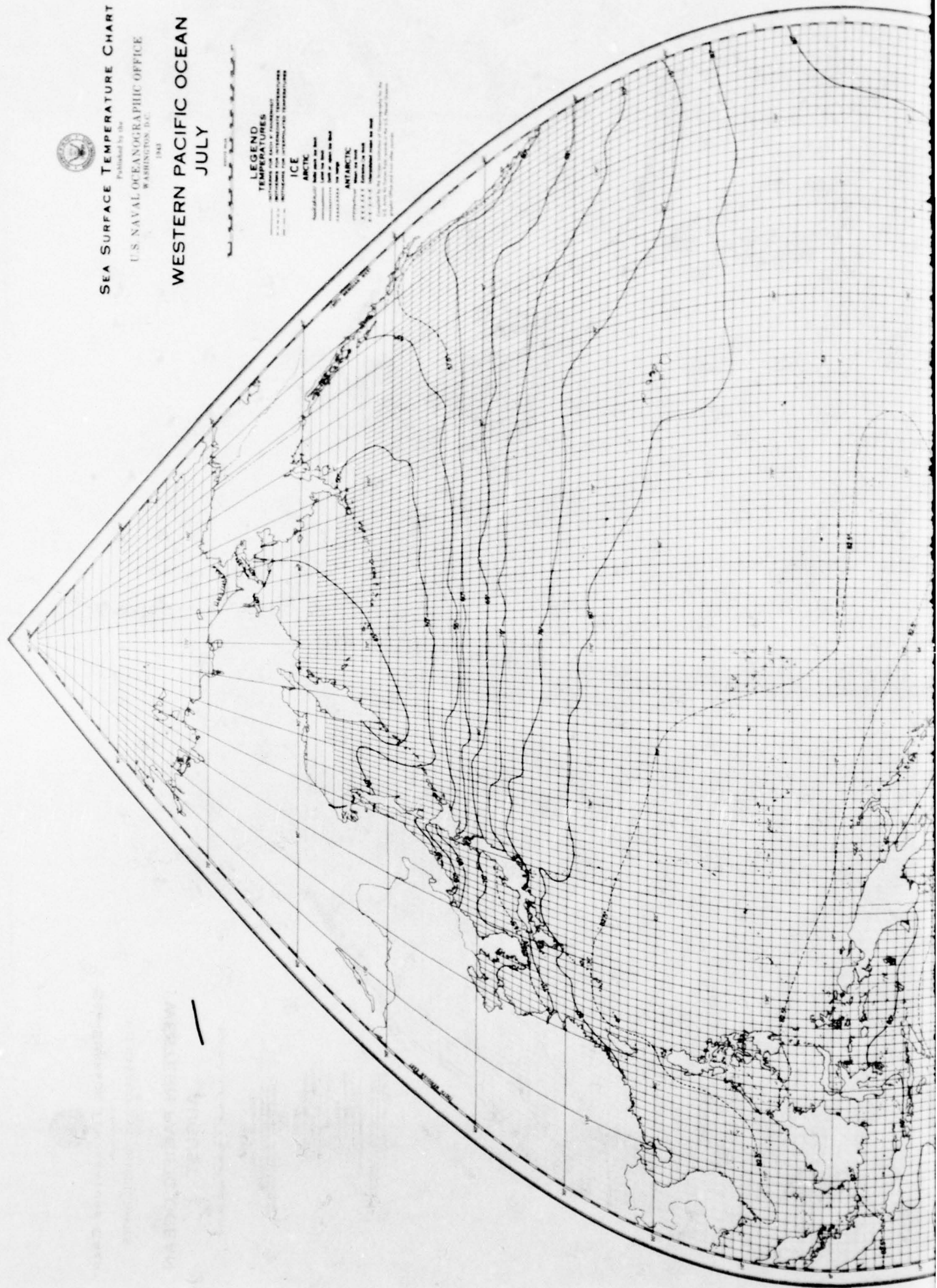
ARCTIC

Sea ice  
Land ice  
Icebergs  
Ice fields  
Icebergs  
Ice fields  
Icebergs  
Ice fields

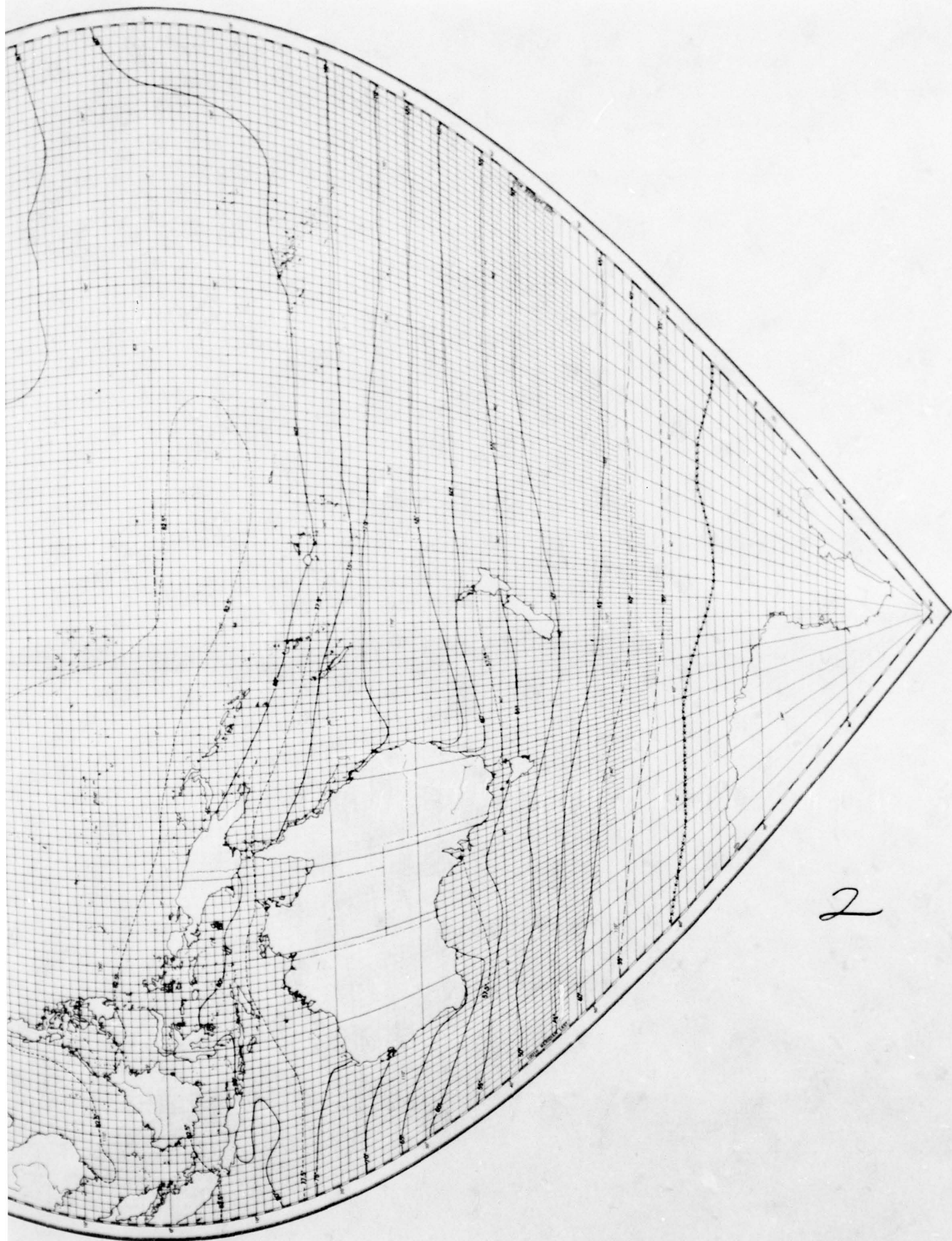
ANTARCTIC

Sea ice  
Land ice  
Icebergs  
Ice fields  
Icebergs  
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Ice fields

U.S. Naval Oceanographic Office, Washington, D.C.  
U.S. Navy, Department of the Navy, Navy Department Building, Washington, D.C.



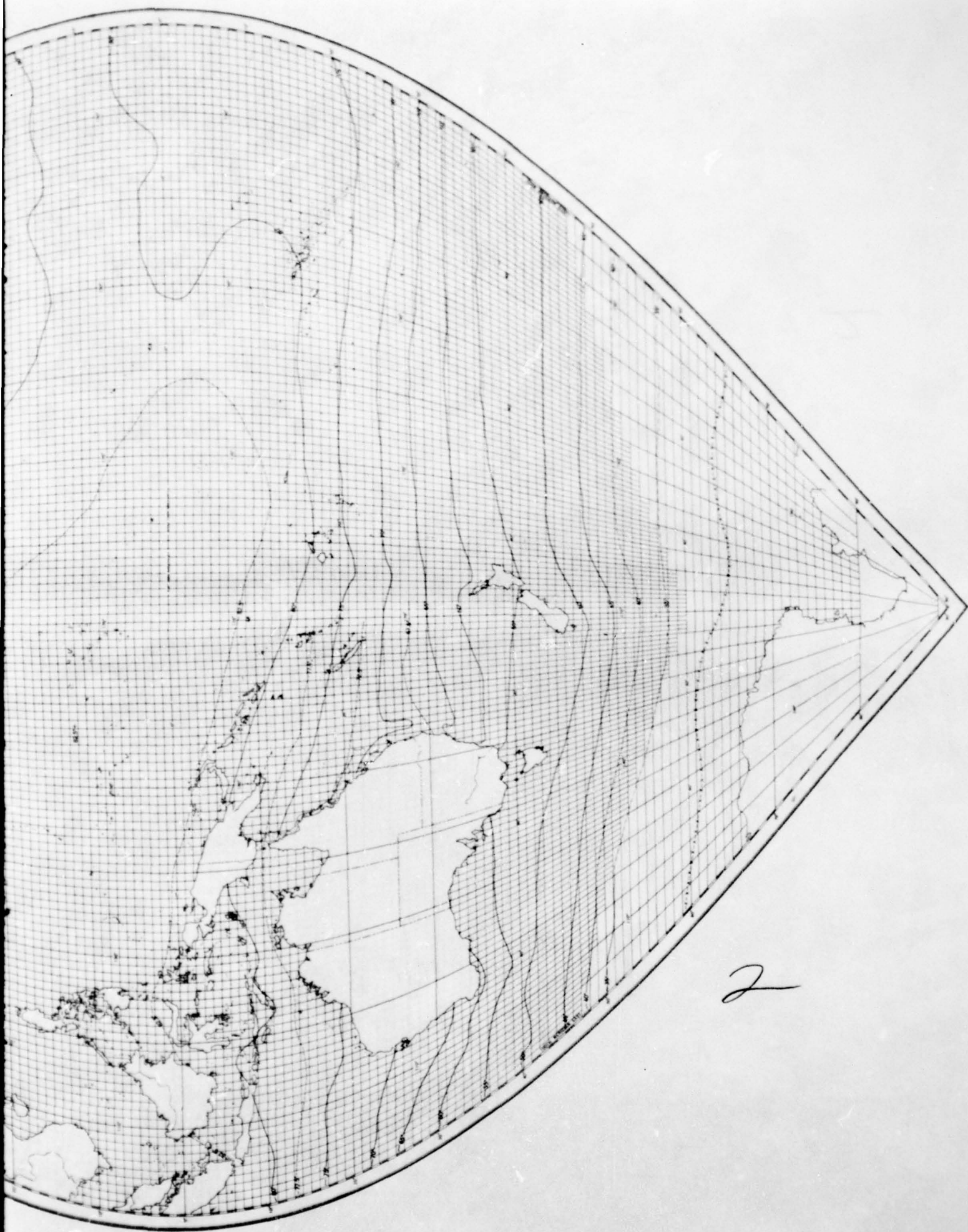




2









SEA SURFACE TEMPERATURE CHART  
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WASHINGTON, D.C.  
1941

WESTERN PACIFIC OCEAN  
SEPTEMBER



LEGEND

TEMPERATURES

Isobars of surface temperature  
Isobars of intermediate temperature  
Isobars of bottom temperature

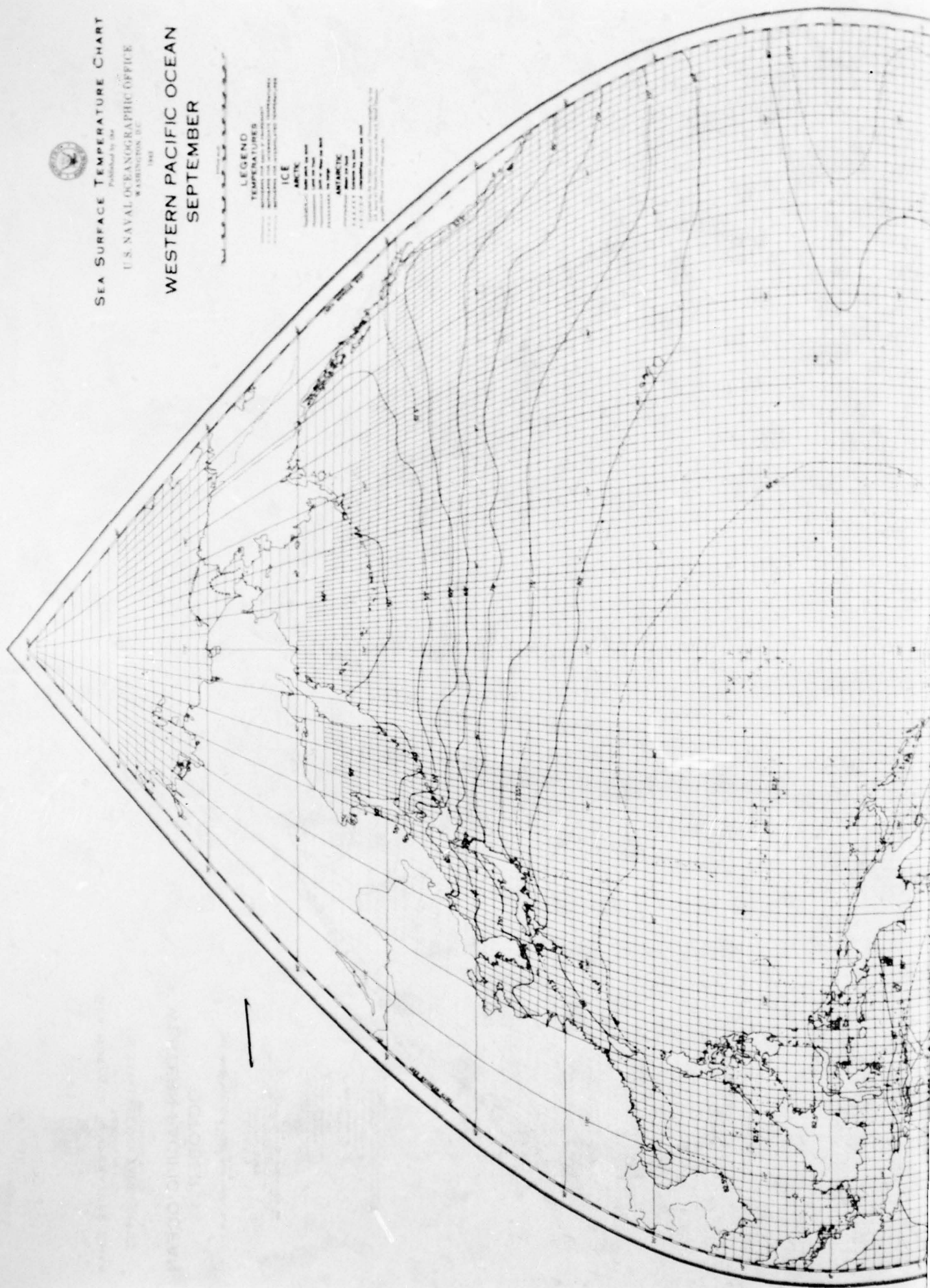
ICE

ARCTIC

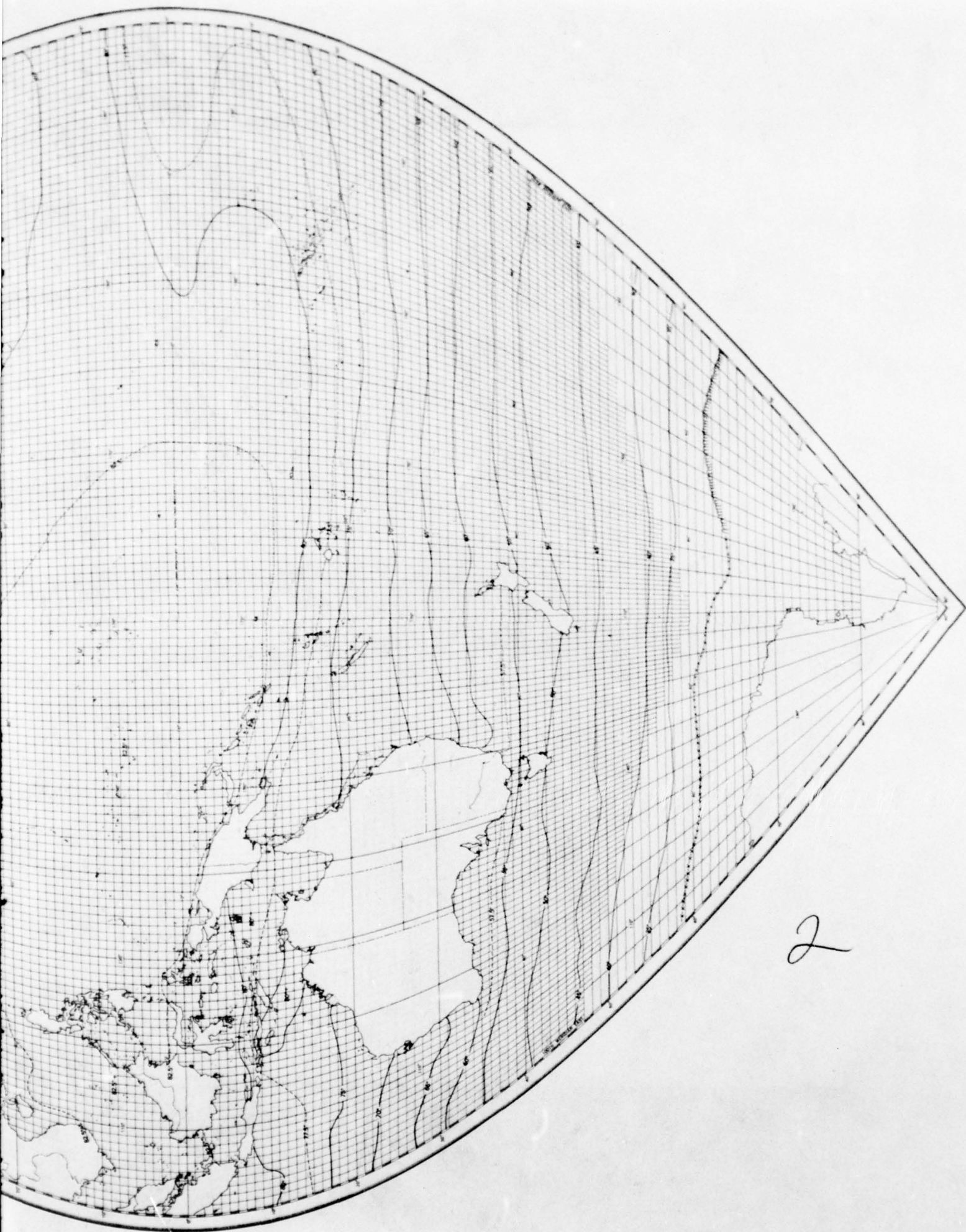
Ice edge  
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Ice edge

ANTARCTIC

Ice edge  
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SEA SURFACE TEMPERATURE CHART  
Published by the  
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WASHINGTON, D.C.  
1943

# WESTERN PACIFIC OCEAN OCTOBER

Scale of Miles  
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490 500 510 520 530 540 550 560 570 580 590 600 610 620 630 640 650 660 670 680 690 700 710 720 730 740 750 760 770 780 790 800 810 820 830 840 850 860 870 880 890 900 910 920 930 940 950 960 970 980 990 1000

LEGEND  
TEMPERATURES  
Isobars for 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000

## ICE

Arctic  
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## ANTARCTIC

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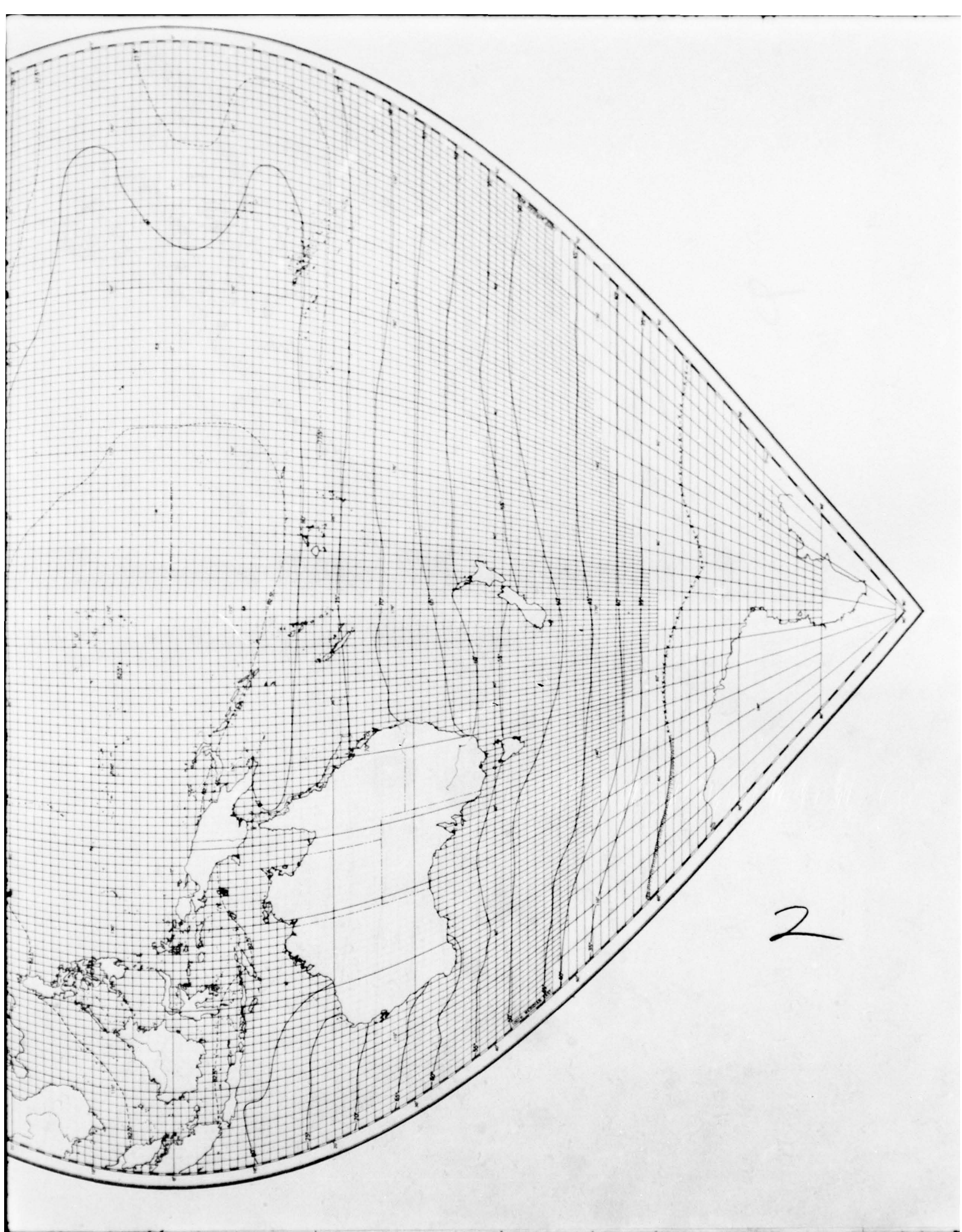
Icebergs  
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Ice packs  
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Ice floes

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Ice floes

Icebergs  
Ice fields  
Ice packs  
Ice floes







# SEA SURFACE TEMPERATURE CHART

Published by the  
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1341

## WESTERN PACIFIC OCEAN NOVEMBER

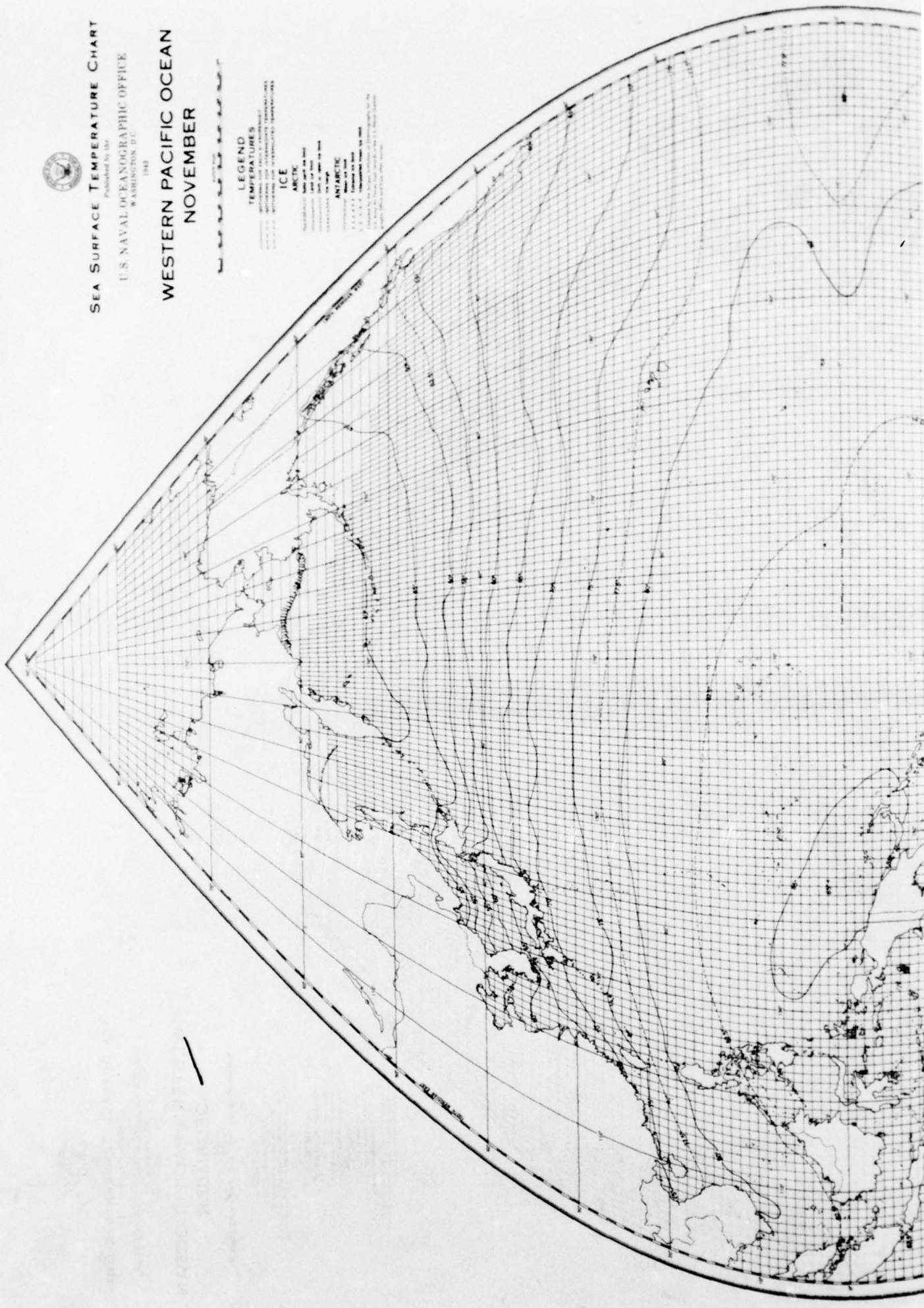


### LEGEND

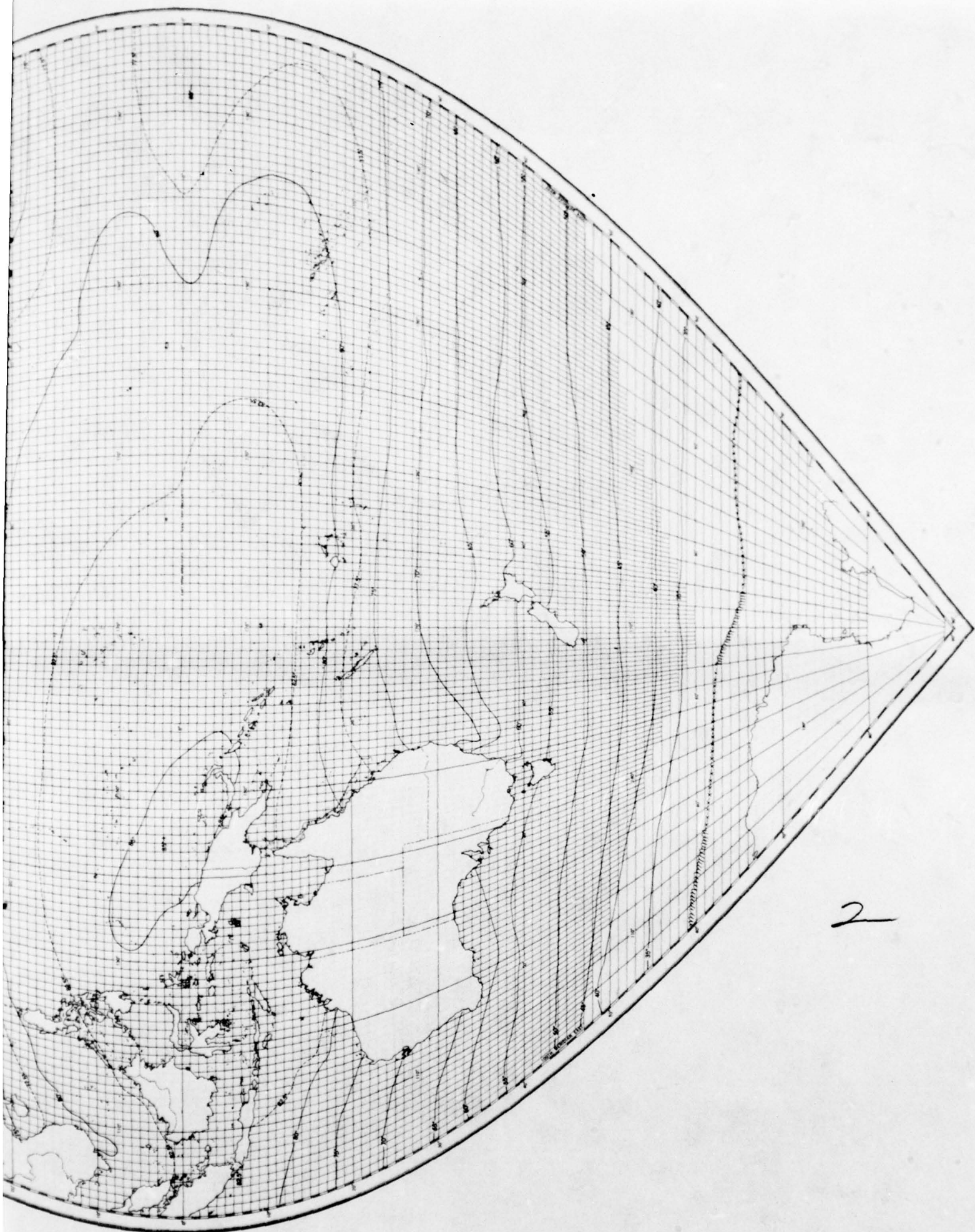
TEMPERATURES  
SURFACE TEMPERATURES  
TEMPERATURES AT 100 METERS  
TEMPERATURES AT 200 METERS  
TEMPERATURES AT 300 METERS  
TEMPERATURES AT 400 METERS  
TEMPERATURES AT 500 METERS  
TEMPERATURES AT 600 METERS  
TEMPERATURES AT 700 METERS  
TEMPERATURES AT 800 METERS  
TEMPERATURES AT 900 METERS  
TEMPERATURES AT 1000 METERS

### ICE

ARCTIC  
ANTARCTIC  
TEMPERATURES AT 100 METERS  
TEMPERATURES AT 200 METERS  
TEMPERATURES AT 300 METERS  
TEMPERATURES AT 400 METERS  
TEMPERATURES AT 500 METERS  
TEMPERATURES AT 600 METERS  
TEMPERATURES AT 700 METERS  
TEMPERATURES AT 800 METERS  
TEMPERATURES AT 900 METERS  
TEMPERATURES AT 1000 METERS



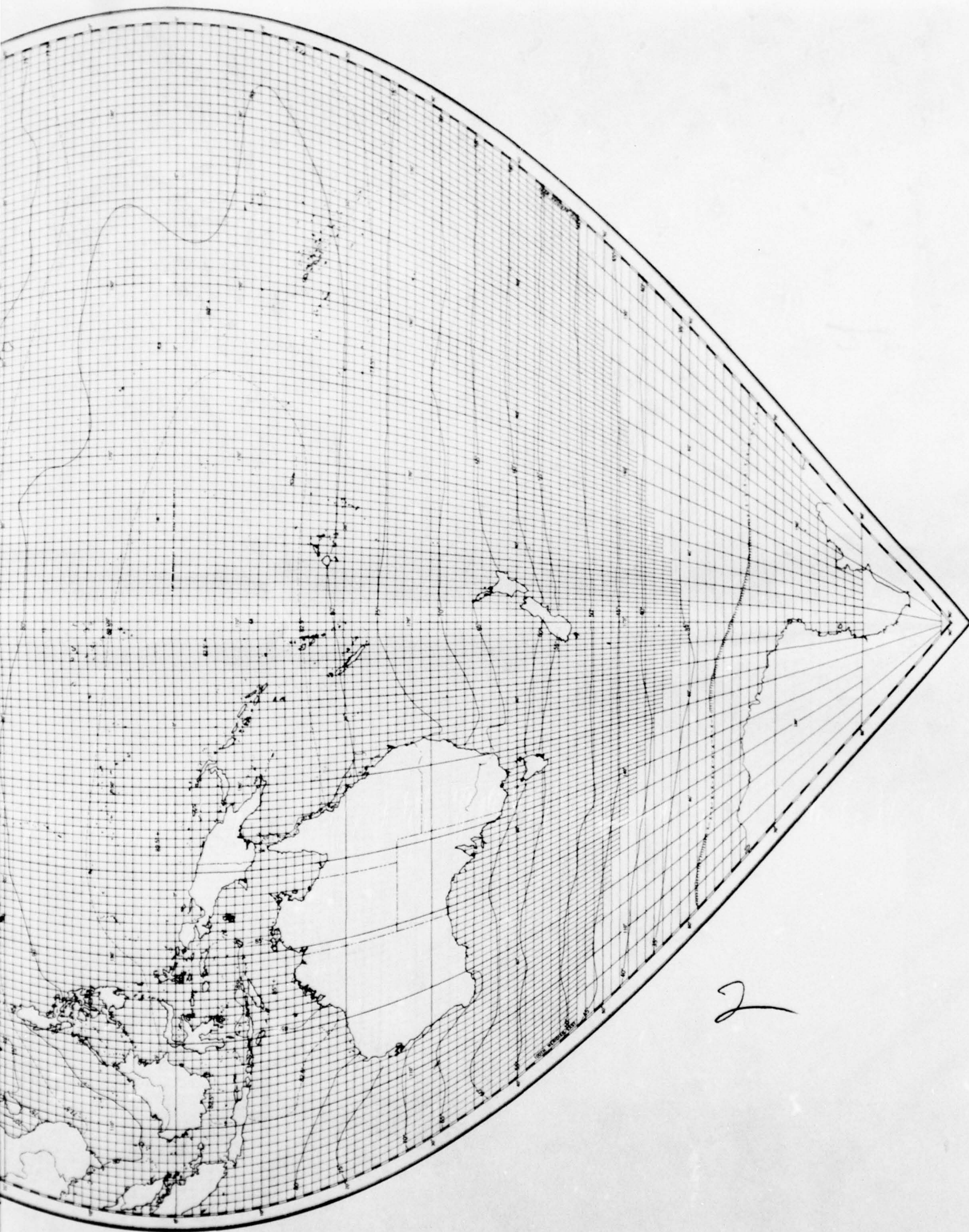




2







2



SEA SURFACE TEMPERATURE CHART  
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WASHINGTON, D.C.  
1941

INDIAN OCEAN  
JANUARY



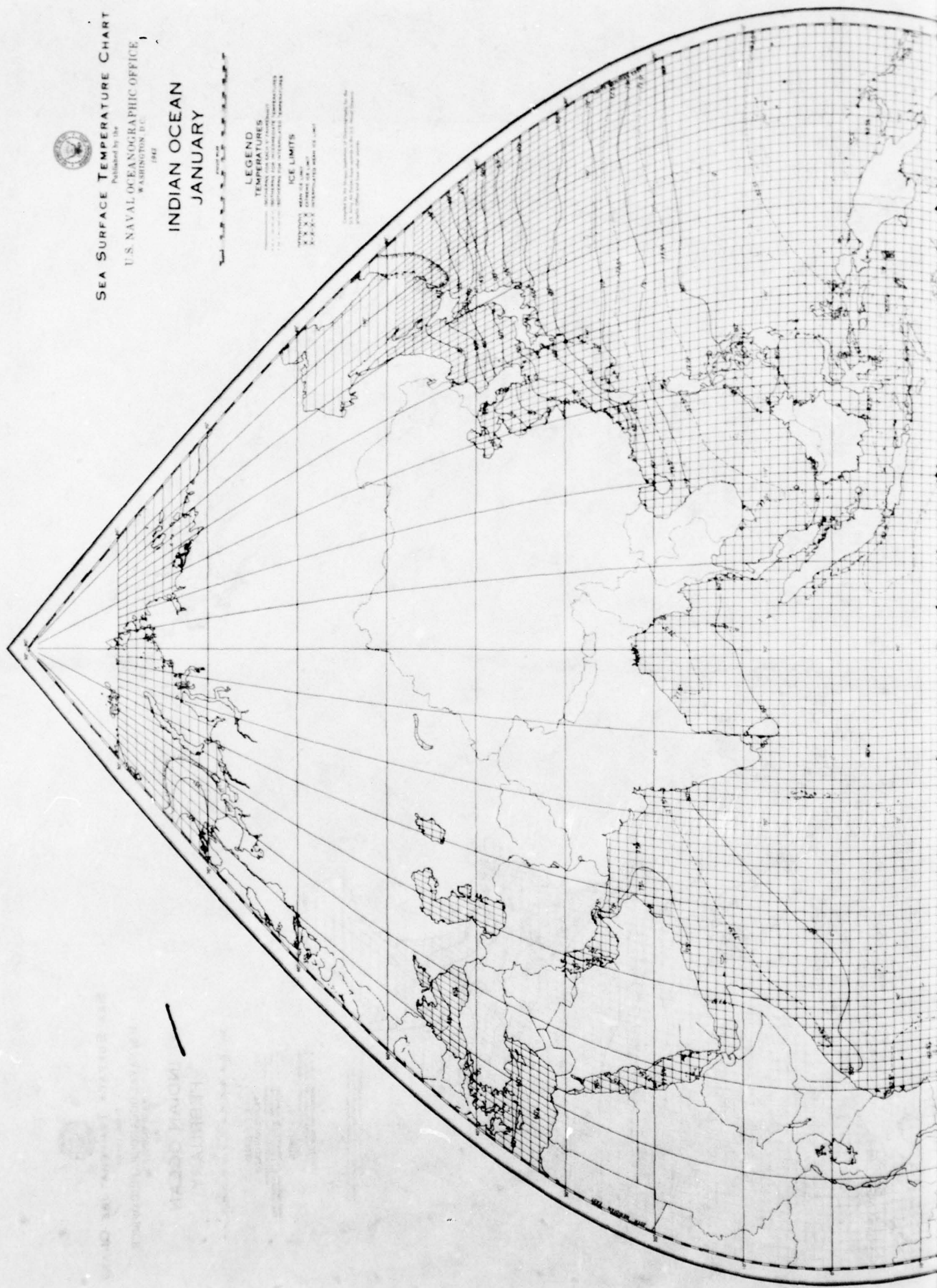
LEGEND

TEMPERATURES  
SURFACE TEMPERATURES  
TEMPERATURES FOR INTERPOLATED TEMPERATURES  
TEMPERATURES FOR INTERPOLATED TEMPERATURES

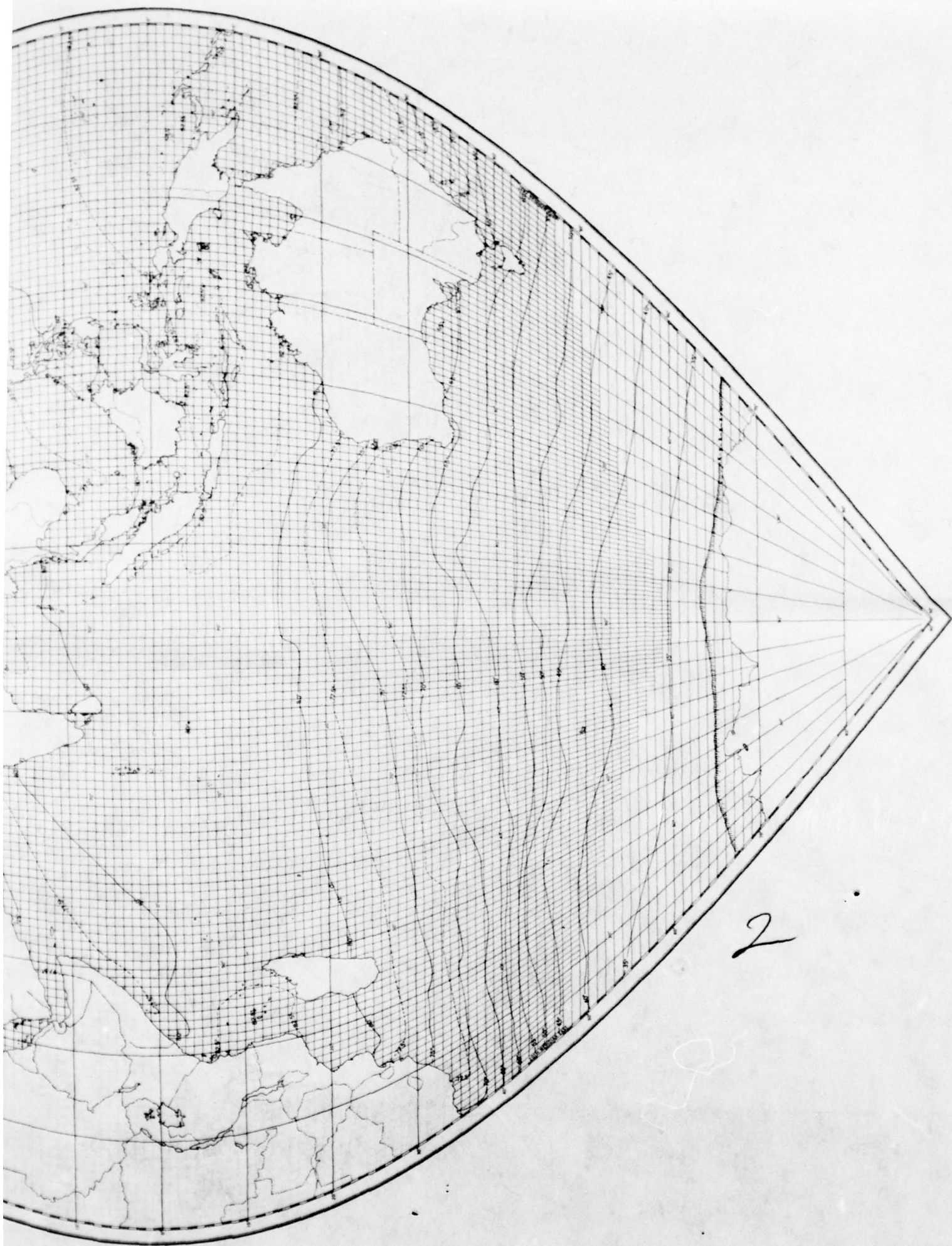
ICE LIMITS

TEMPERATURES  
SURFACE TEMPERATURES  
TEMPERATURES FOR INTERPOLATED TEMPERATURES  
TEMPERATURES FOR INTERPOLATED TEMPERATURES

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104

INDIAN OCEAN  
FEBRUARY

	every day				
Week	1-1-97	8-1-97	15-1-97	22-1-97	29-1-97
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73	10	10			

LEGEND

LEGEND  
TEMPERATURES

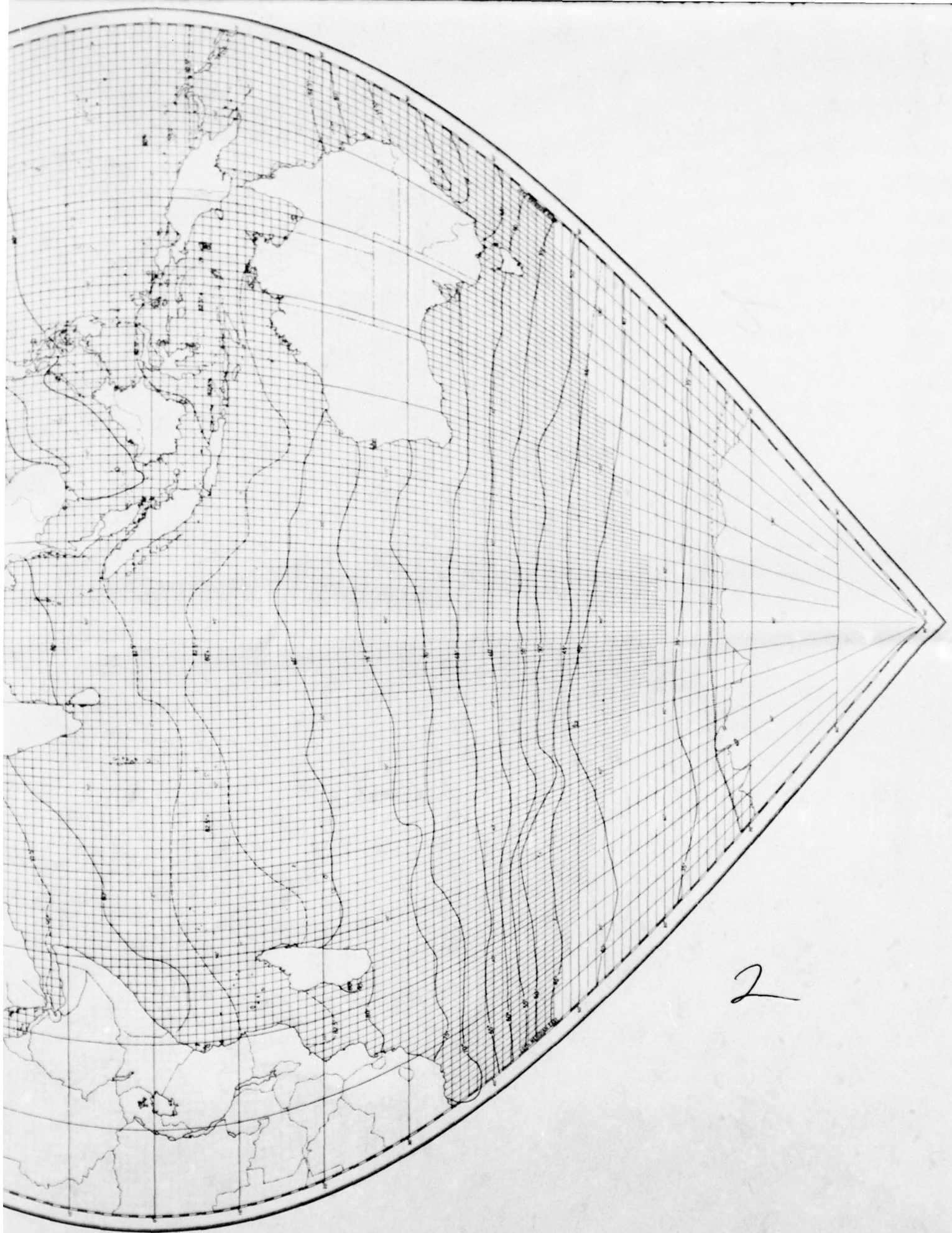
1. *Chlorophyll a* (Chl *a*) is the primary photosynthetic pigment in most plants and algae. It is a green pigment that absorbs light energy in the blue and red regions of the visible spectrum.

### ICE LIMITS

TABLE 1. *Continued*

(supported by the Science Foundation of China) through the Key Project of National Natural Science Foundation of China.







# SEA SURFACE TEMPERATURE CHART

Published by the

U.S. NAVAL OCEANOGRAPHIC OFFICE  
WASHINGTON, D.C.

1943

## INDIAN OCEAN MARCH

Scale 1:100,000

### LEGEND

#### TEMPERATURES

— 100° F. and above  
— 90° F.  
— 80° F.  
— 70° F.  
— 60° F.  
— 50° F.  
— 40° F.  
— 30° F.  
— 20° F.  
— 10° F.  
— 0° F.

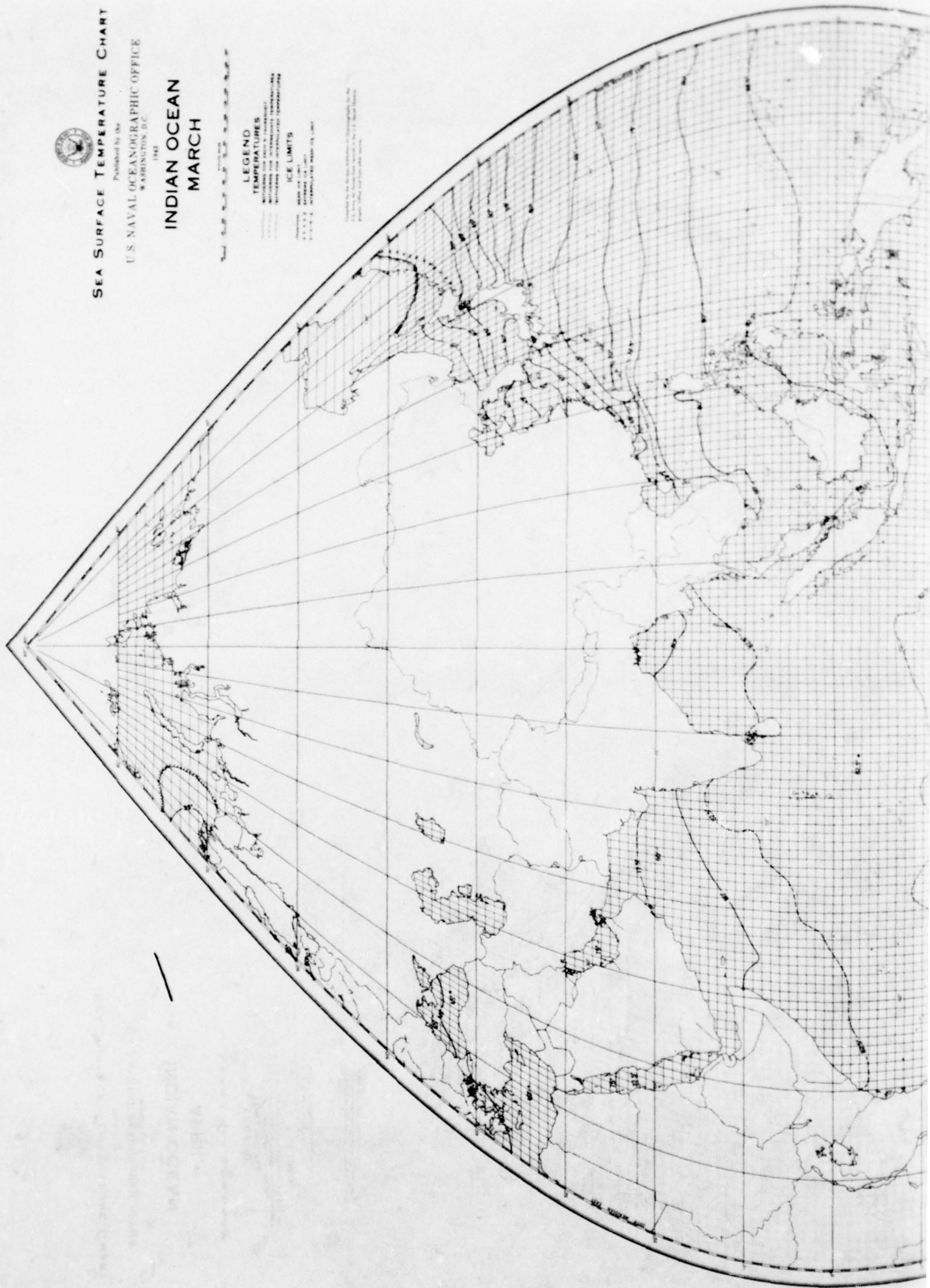
#### ICE LIMITS

— 100%  
— 75%  
— 50%  
— 25%  
— 10%  
— 5%  
— 1%  
— 0%

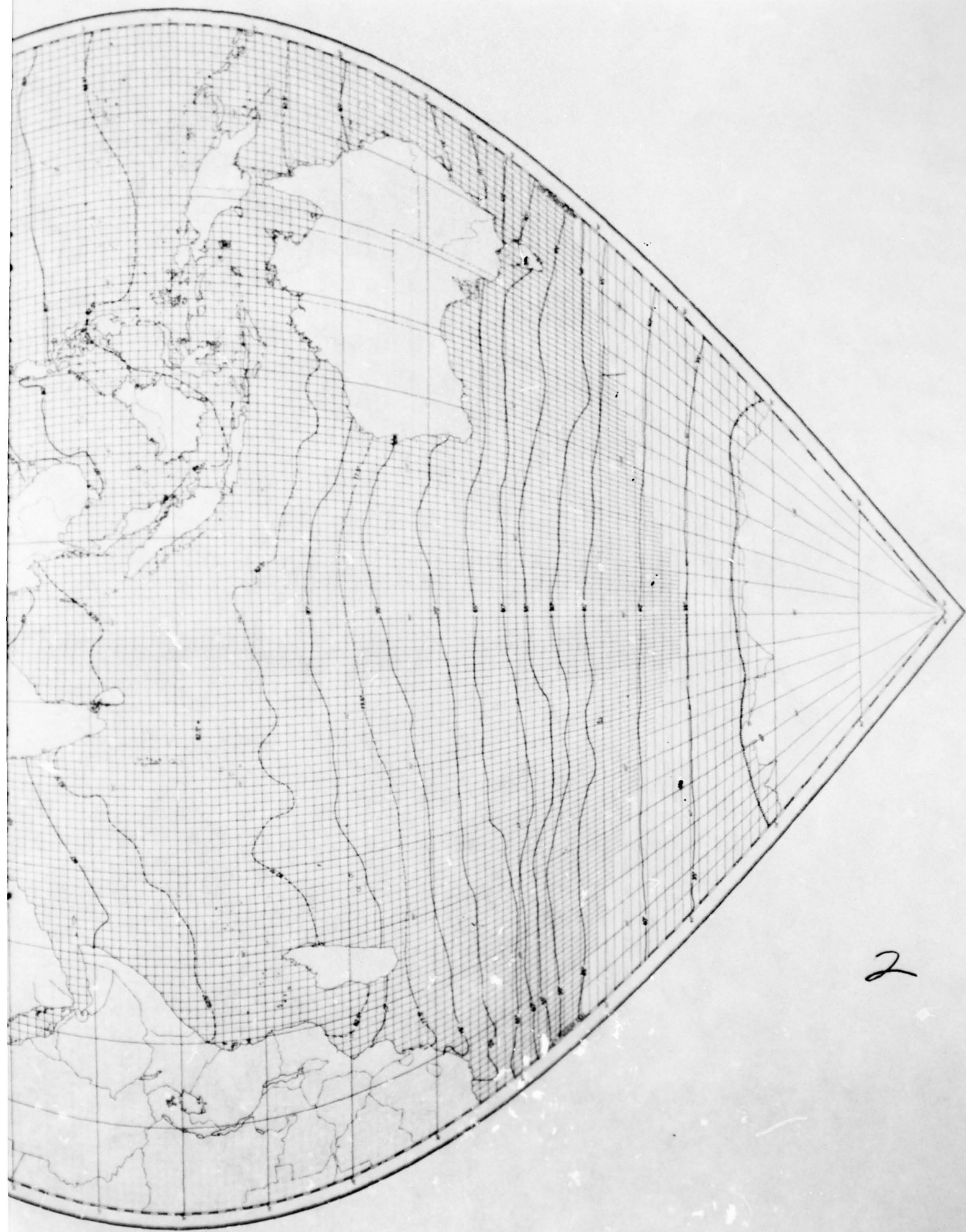
#### WINDS

— 10 knots  
— 20 knots  
— 30 knots  
— 40 knots  
— 50 knots  
— 60 knots  
— 70 knots  
— 80 knots  
— 90 knots  
— 100 knots

Charted by the Hydrographic Office, Washington, D.C.  
U.S. Navy, Office of Naval Intelligence, U.S. Navy Hydrographic Office  
Revised 1943









INDIAN OCEAN  
APRIL



LEGEND  
TEMPERATURES

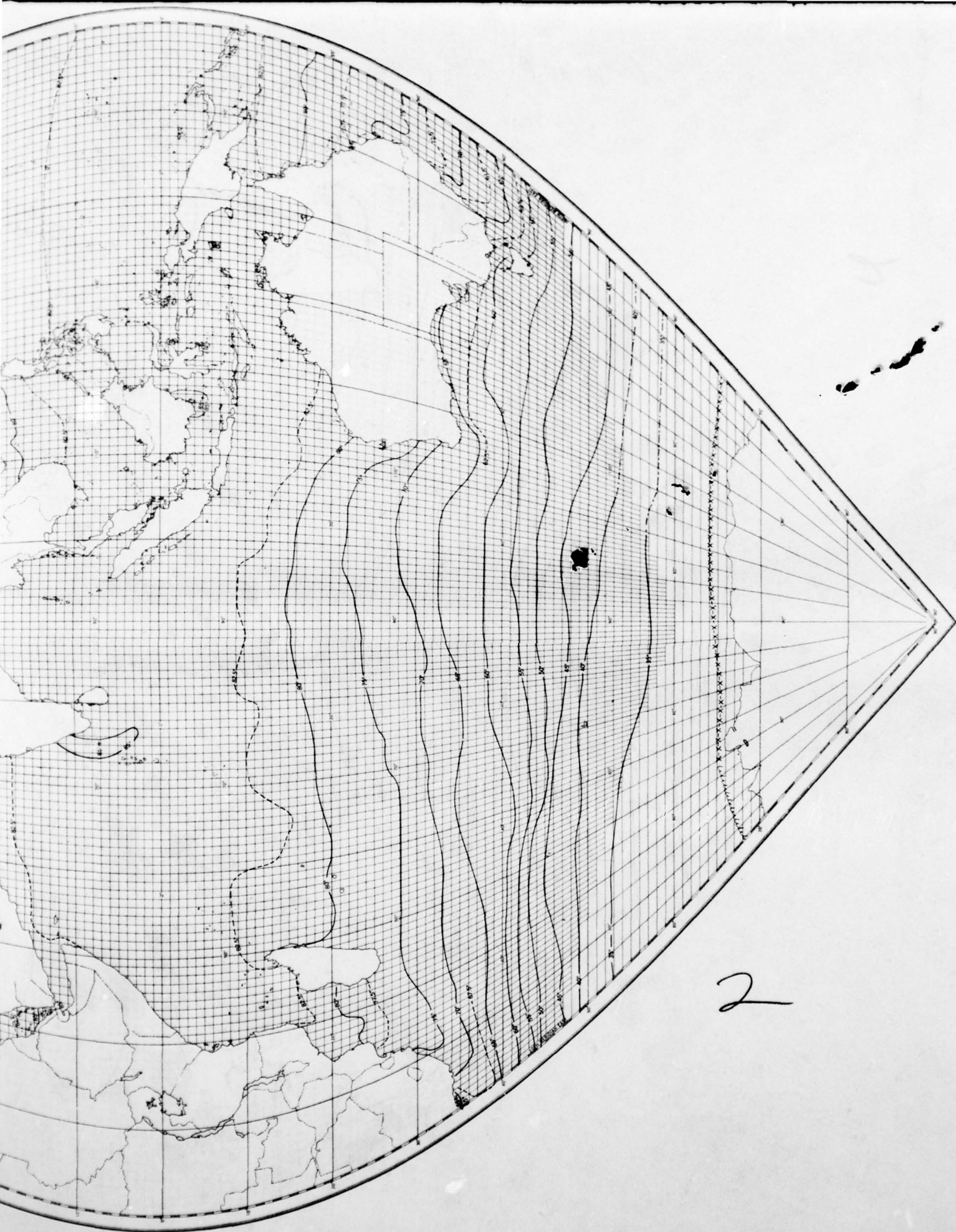
[illegible]

## CE LIMITS

Study Population	Age Range (yr)	Sample Size (n)	Study Design
1. General population	18-74	1,000	Cross-sectional
2. Hospitalized patients	18-74	500	Cohort
3. Outpatient clinic	18-74	250	Case-control
4. Long-term care facility	18-74	100	Case-control
5. Community-based	18-74	750	Cross-sectional
6. Academic setting	18-74	300	Cohort
7. Military service	18-74	1,200	Cross-sectional
8. Correctional facility	18-74	400	Case-control
9. Research institution	18-74	600	Cohort
10. General practice	18-74	800	Cross-sectional

is compiled by the Institute of Demography for the U.S. Army. All figures have appeared in the U.S. Armed Forces Geographic Office and its other works.





2

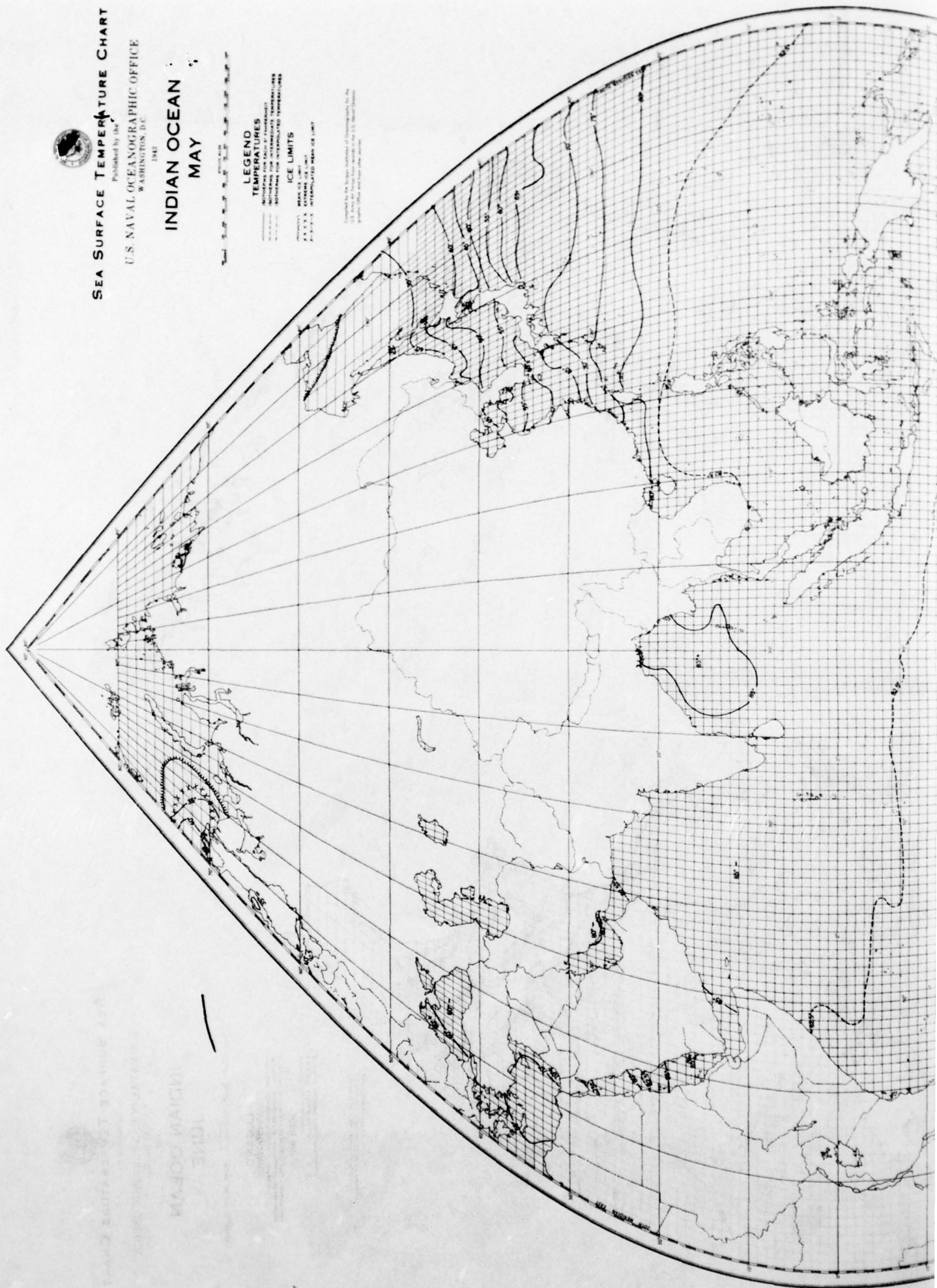


INDIAN OCEAN  
MAY

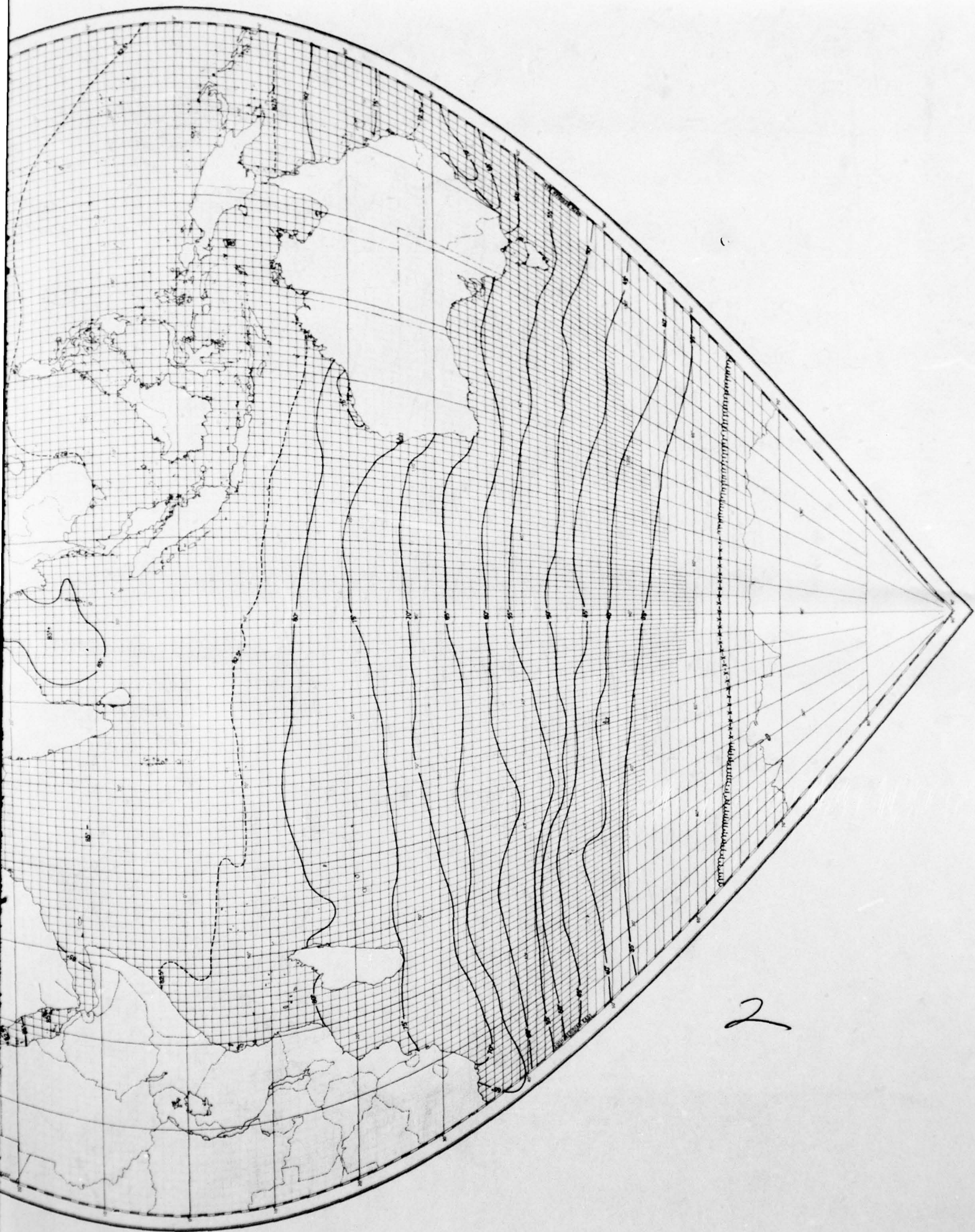
**LEGEND**  
**TEMPERATURES**  
METHODS FOR EACH 5° FAHRENHEIT  
METHODS FOR INTERPOLATED TEMPERATURES  
METHODS FOR INTERPOLATED TEMPERATURES

**ICE LIMITS**  
MEAN ICE LIMIT  
EXTREME ICE LIMIT  
INTERPOLATED MEAN ICE LIMIT

Completed by the Scripps Institution of Oceanography for the  
13. During the survey from records in the U.S. National Oceanic  
and Atmospheric Administration and from other sources.







2



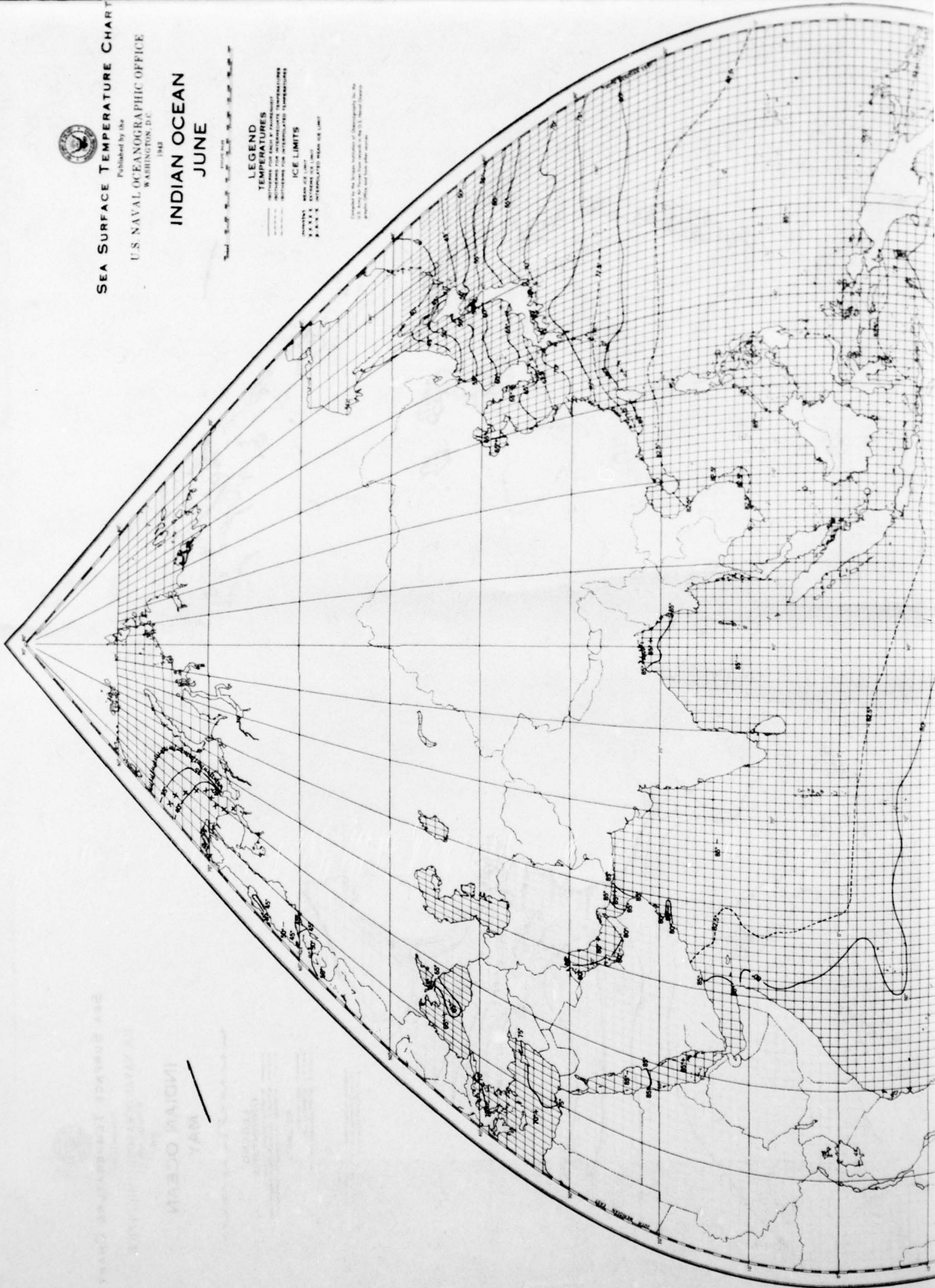
SEA SURFACE TEMPERATURE CHART  
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WASHINGTON, D.C.  
1943

INDIAN OCEAN  
JUNE

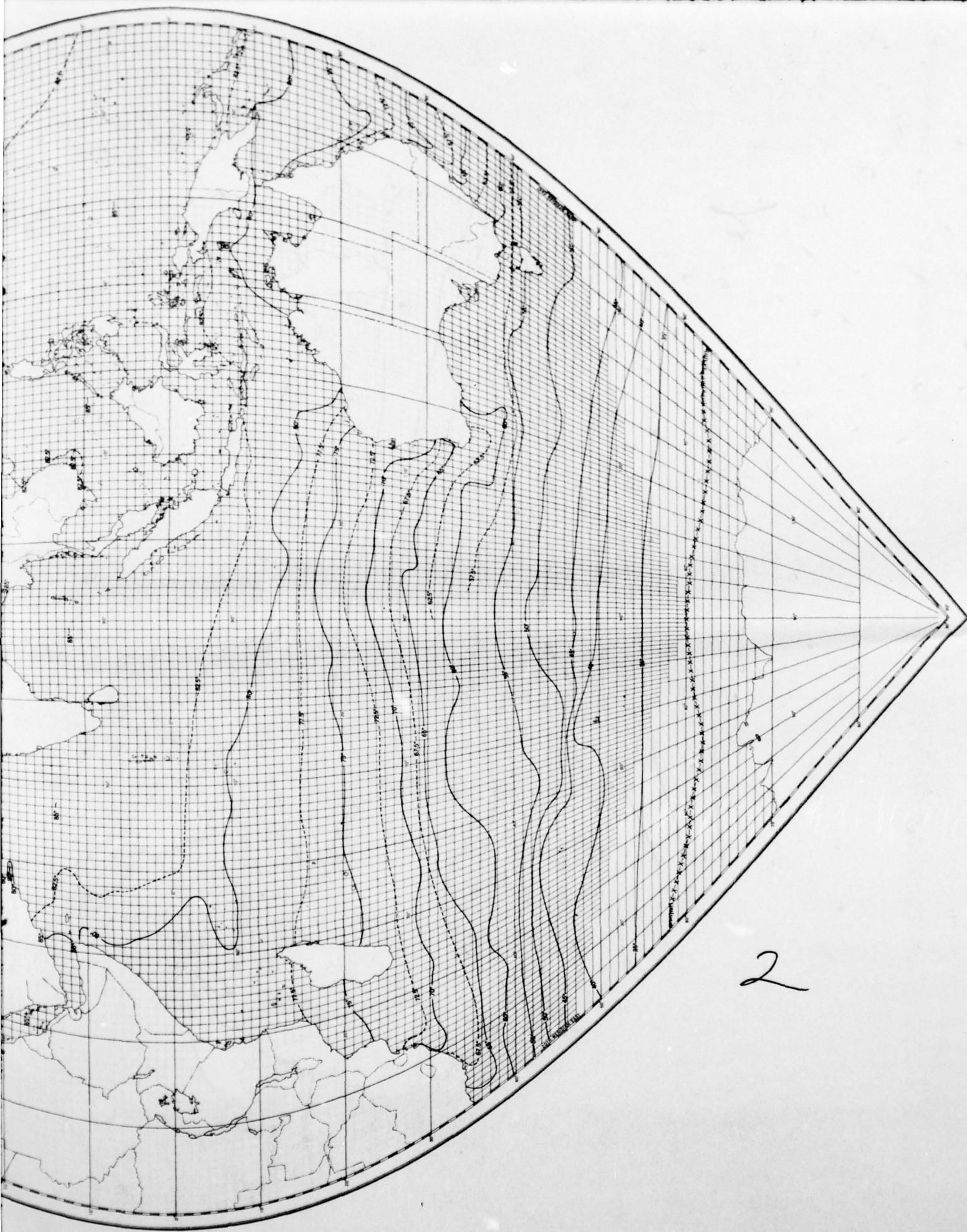
Scale of Miles

LEGEND  
TEMPERATURES  
— OBSERVED AND FAULTS IN OBSERVATION  
--- INTERPOLATED TEMPERATURES  
--- INTERPOLATED TEMPERATURES  
ICE LIMITS  
— MEAN ICE LIMIT  
--- EXTENDED ICE LIMIT  
--- INTERPOLATED MEAN ICE LIMIT

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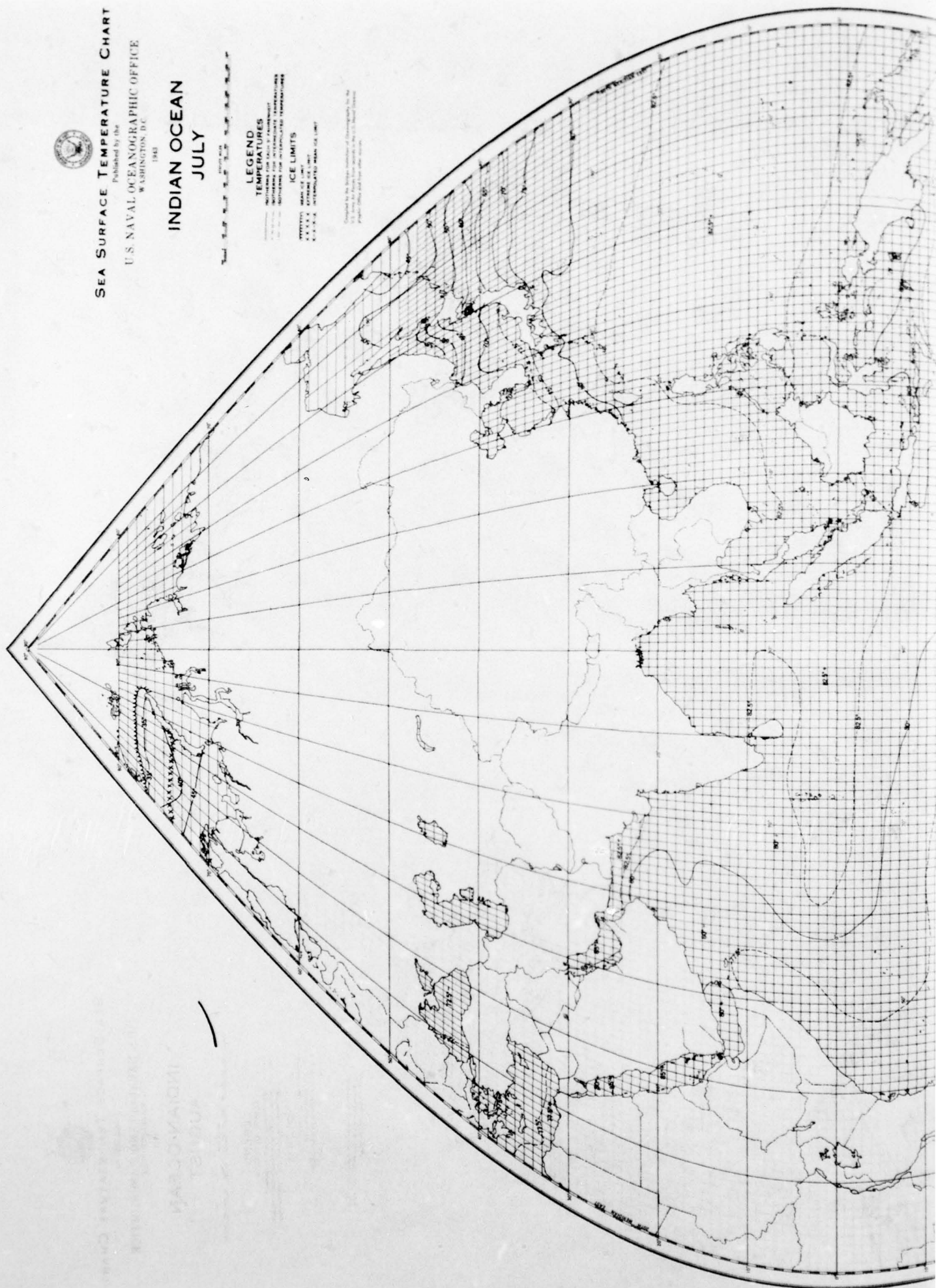


INDIAN OCEAN  
JULY

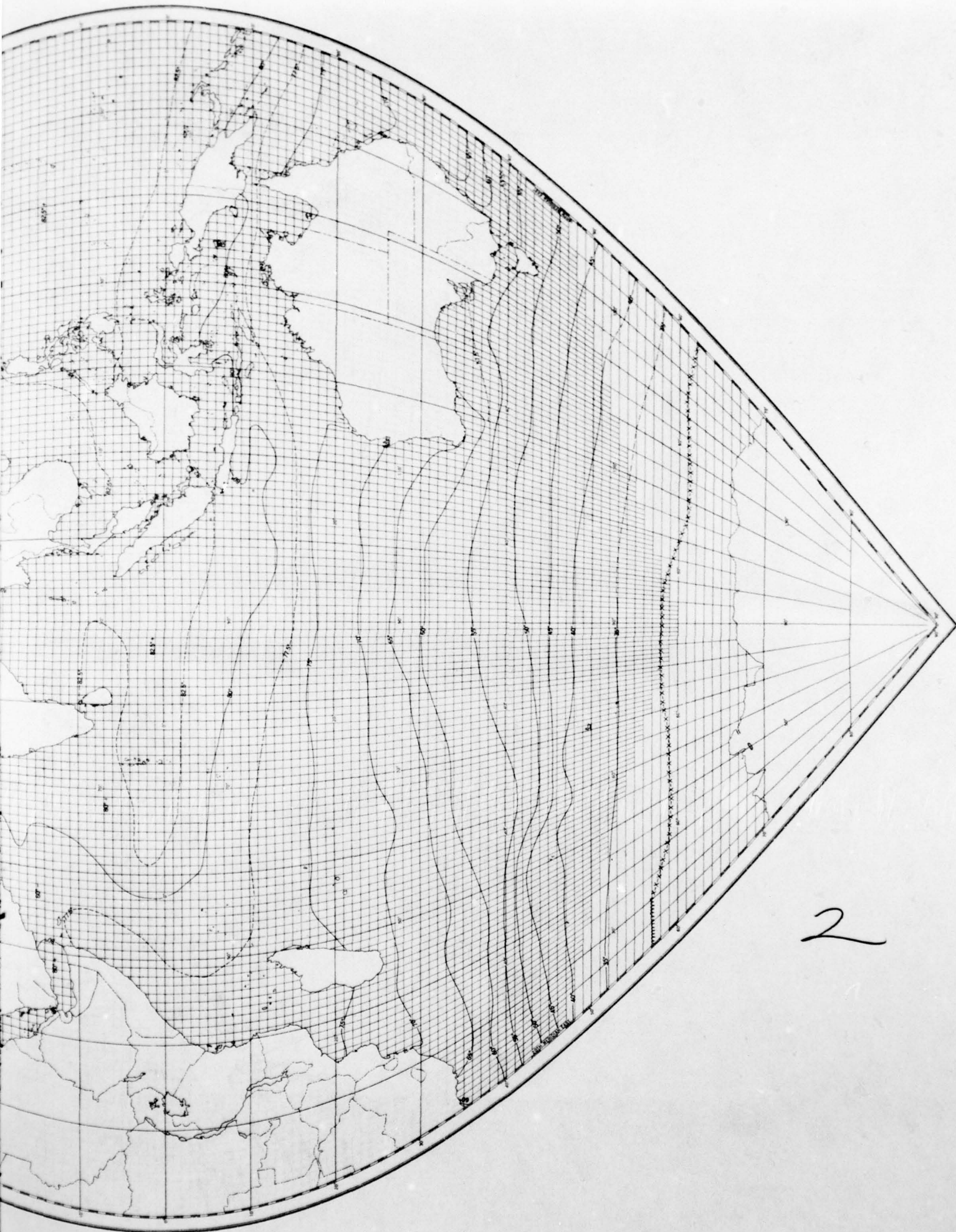
**LEGEND**  
**TEMPERATURES**  
NOTES FOR TABLE 1  
NOTES FOR TABLE 2  
NOTES FOR TABLE 3  
NOTES FOR TABLE 4

**ICE LIMITS**  
MEAN ICE LIMIT  
EXTREME ICE LIMIT  
INTERPOLATED MEAN ICE LIMIT

Completed by the groups members of the community, for the purpose of being able to identify the different types of waste that are being generated in the community.







2



# SEA SURFACE TEMPERATURE CHART

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## INDIAN OCEAN AUGUST



### LEGEND

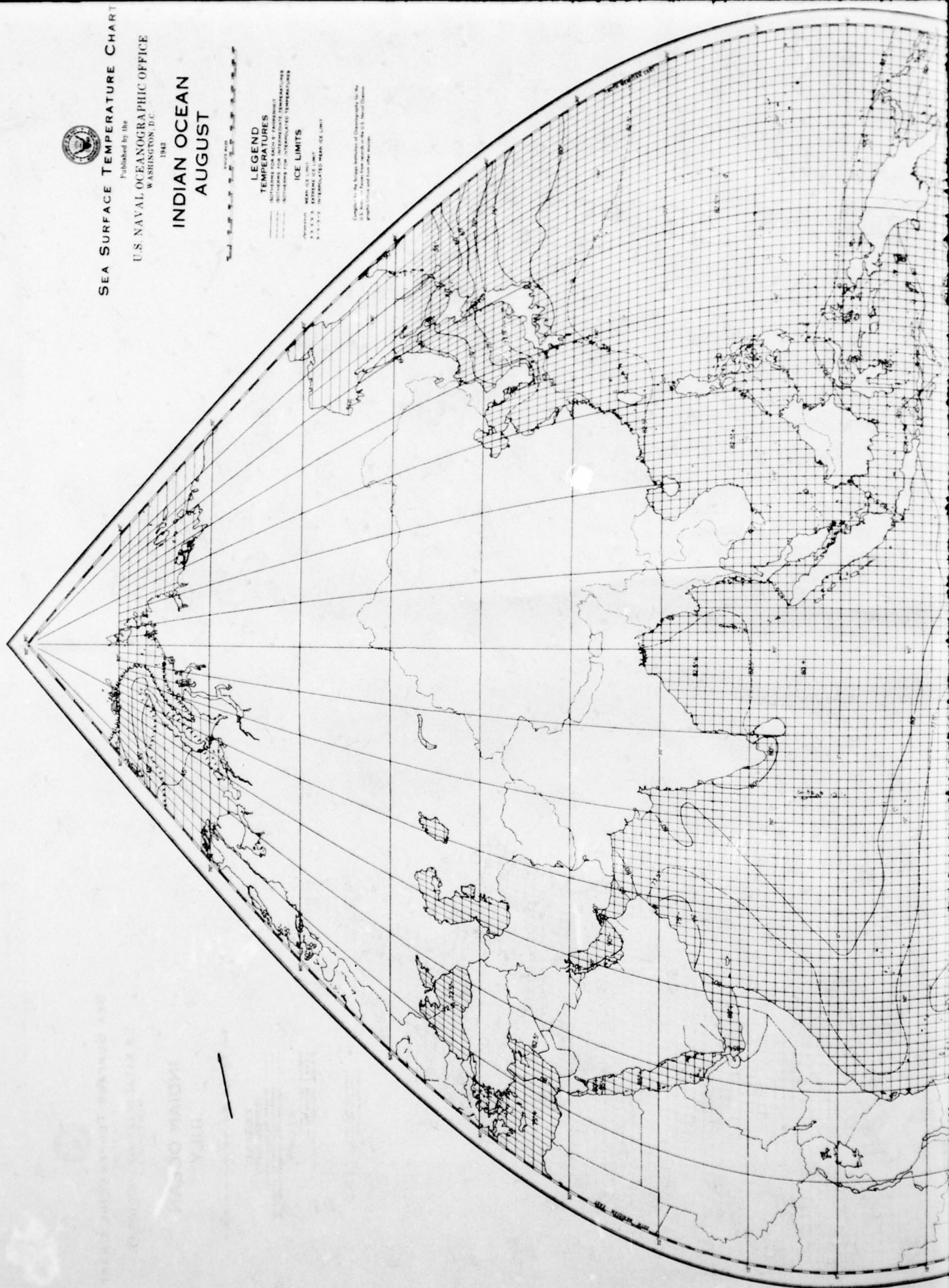
#### TEMPERATURES

— SURFACE TEMPERATURES (Fahrenheit)  
— SURFACE TEMPERATURES (Celsius)  
— INTERPOLATED TEMPERATURES

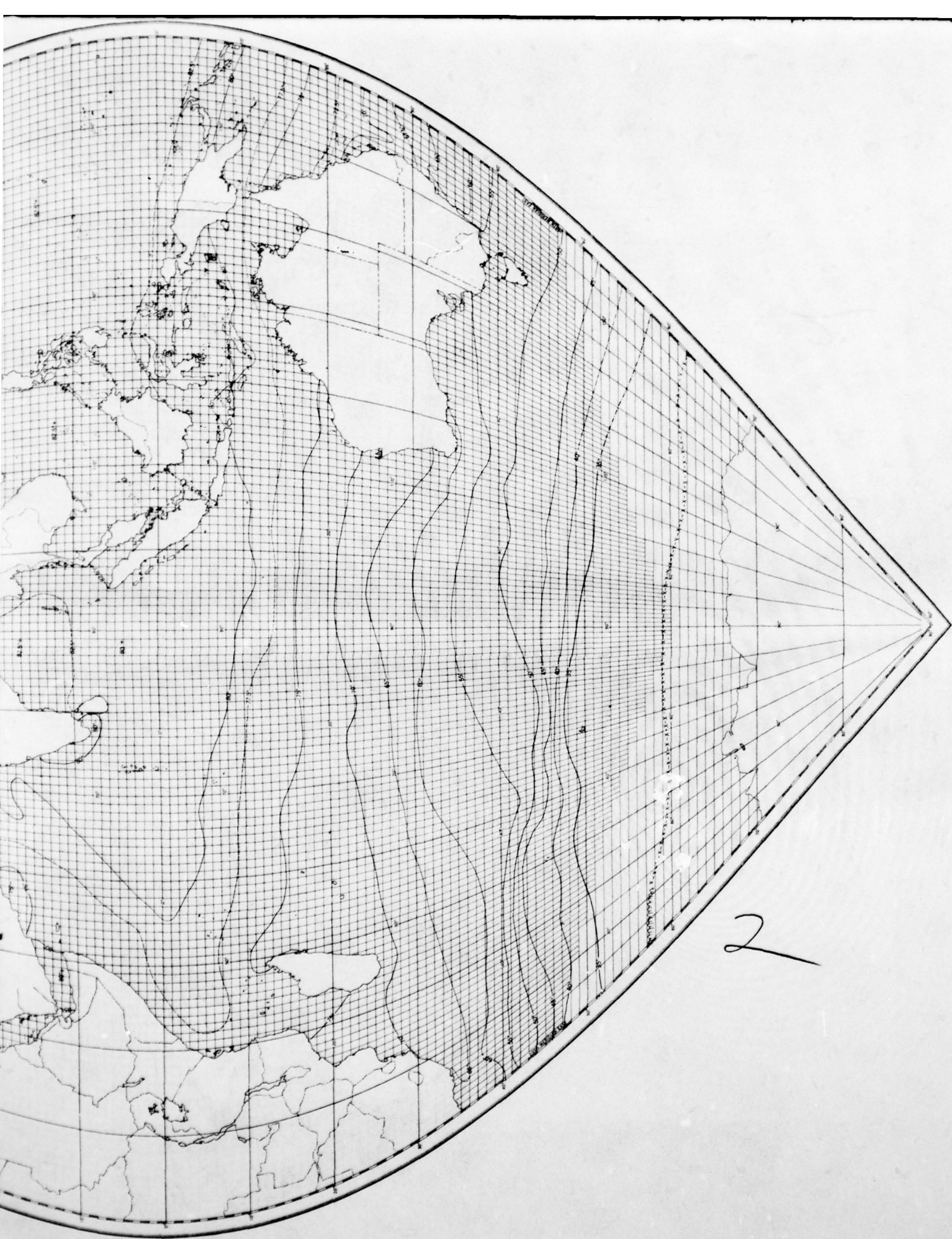
#### ICE LIMITS

— MEAN ICE LIMIT  
— MAXIMUM ICE LIMIT  
— MINIMUM ICE LIMIT

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U.S. Navy Hydrographic Office, U.S. Navy  
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INDIAN OCEAN  
SEPTEMBER

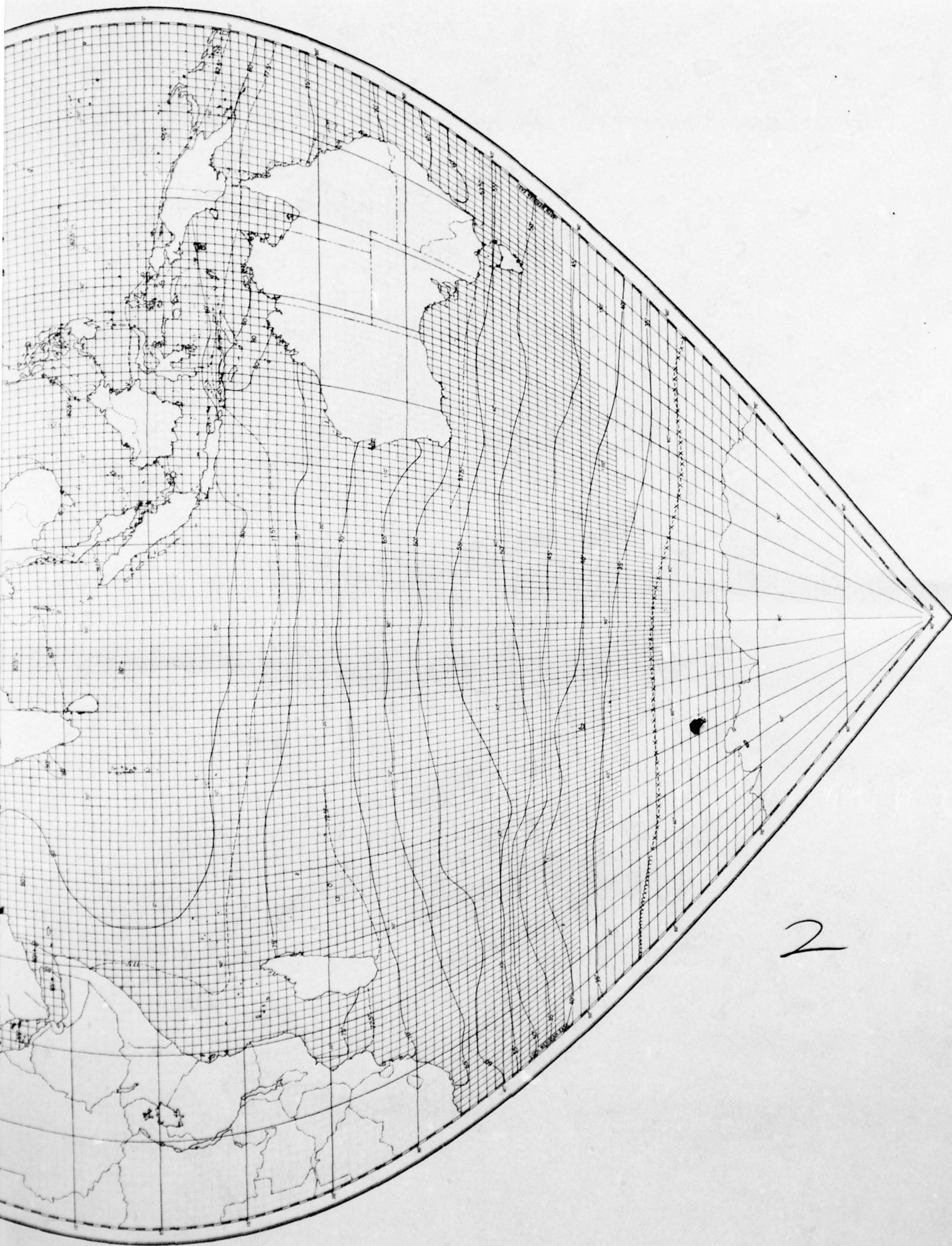
LEGEND  
TEMPERATURES

**LEGEND**  
TEMPERATURES  
ISOTHERMS FOR EACH 5° FAHRENHEIT  
ISOTHERMS FOR INTERMEDIATE TEMPERATURES  
ISOTHERMS FOR INTERPOLATED TEMPERATURES

ICE LIMITS	
MEAN ICE LIMIT	0.000000
EXTREME ICE LIMIT	0.000000
INTERPOLATED MEAN ICE LIMIT	0.000000

Compiled by the Scripps Institute of Oceanography for the U.S. Army Air Force from records in the U.S. Naval Oceanographic Office and from other sources.





2



# SEA SURFACE TEMPERATURE CHART

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## INDIAN OCEAN OCTOBER



### LEGEND

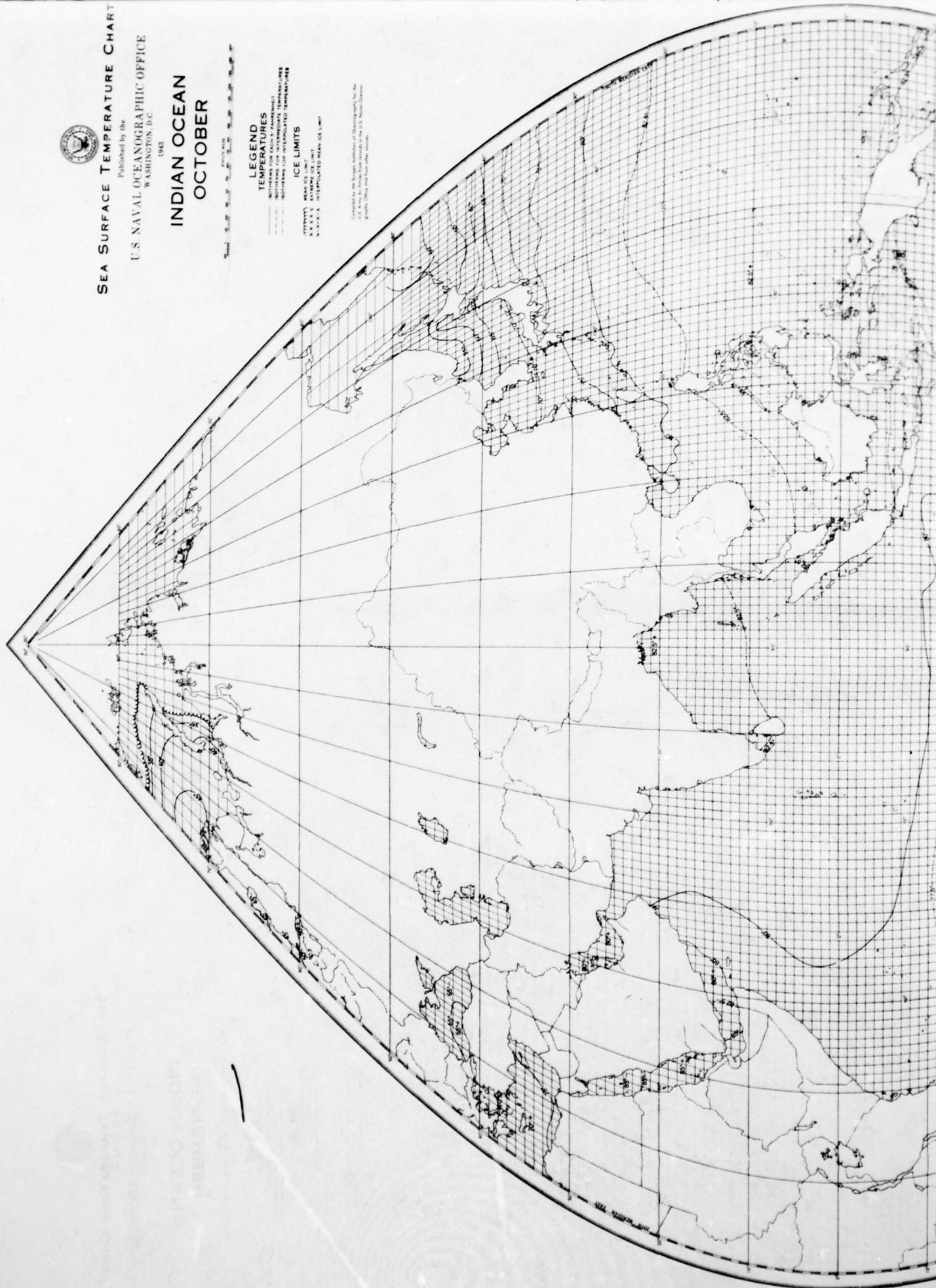
#### TEMPERATURES

— OBSERVED MEAN SURFACE TEMPERATURES  
--- OBSERVED MEAN SURFACE TEMPERATURES  
--- OBSERVED MEAN SURFACE TEMPERATURES

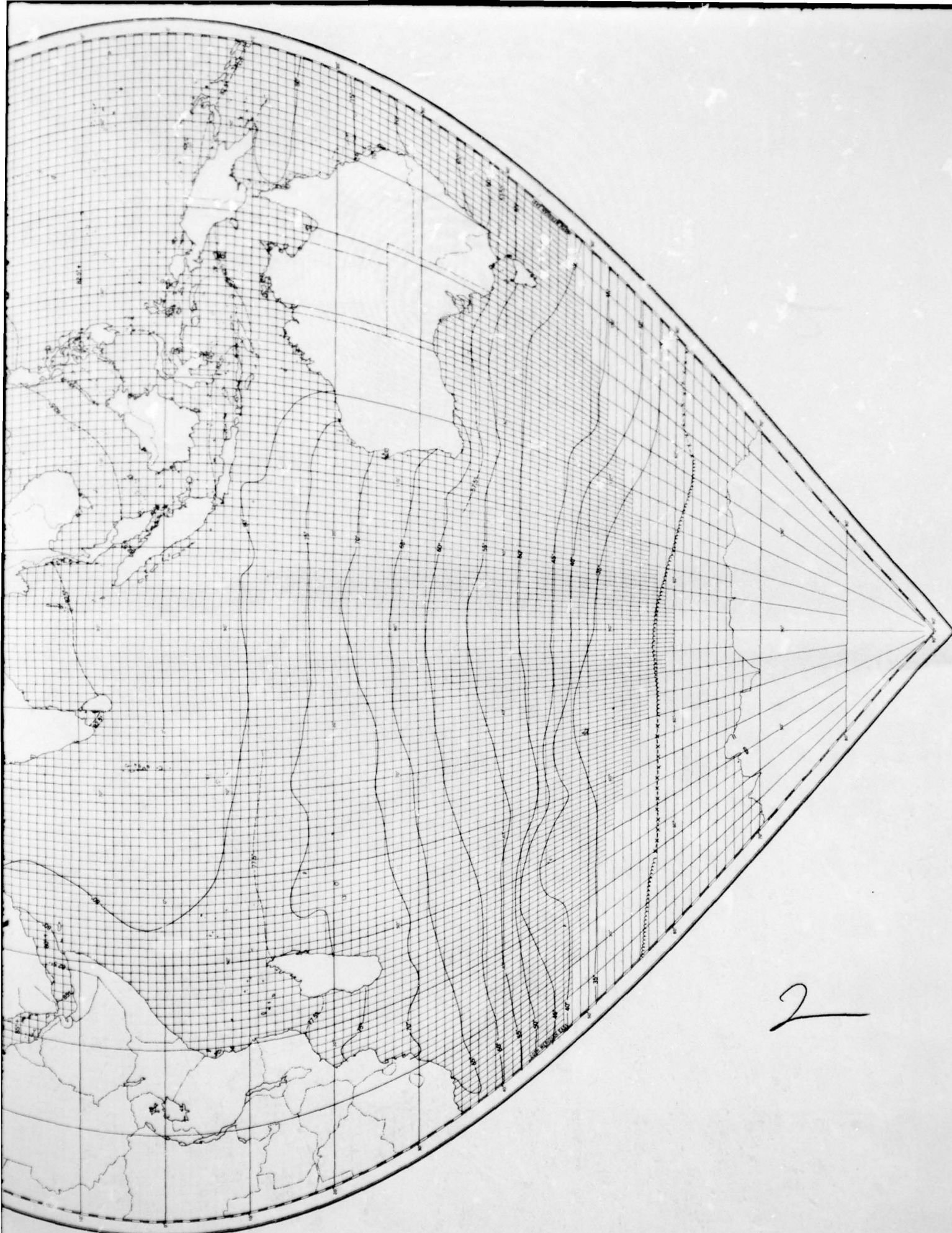
#### ICE LIMITS

XXXXXX MEAN ICE LIMIT  
XXXXXX MEAN ICE LIMIT  
XXXXXX MEAN ICE LIMIT

Compiled by the Hydrographic Office of the U.S. Navy, from the U.S. Navy Oceanographic Office, Washington, D.C.







2

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NAVAL OCEANOGRAPHIC OFFICE NSTL STATION MS  
WORLD ATLAS OF SEA SURFACE TEMPERATURES, SECOND EDITION-1944.(U)  
1973

F/G 8/10

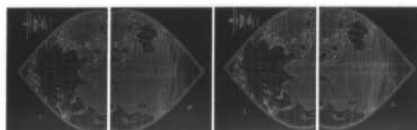
UNCLASSIFIED

N00-PUB-225

NL

2 OF 2

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A058419



END

DATE  
FILMED

11-78

DDC





# SEA SURFACE TEMPERATURE CHART

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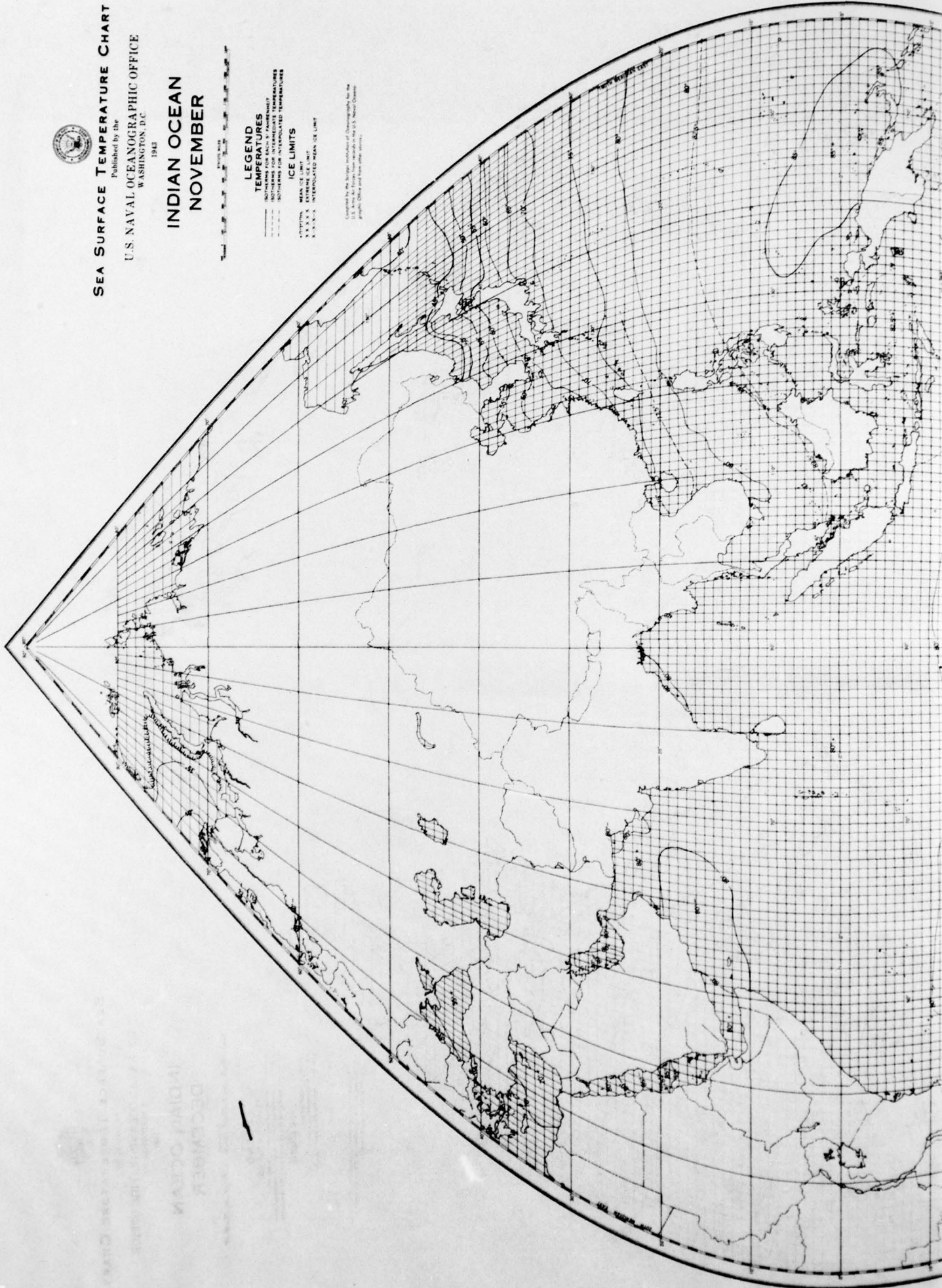
1943

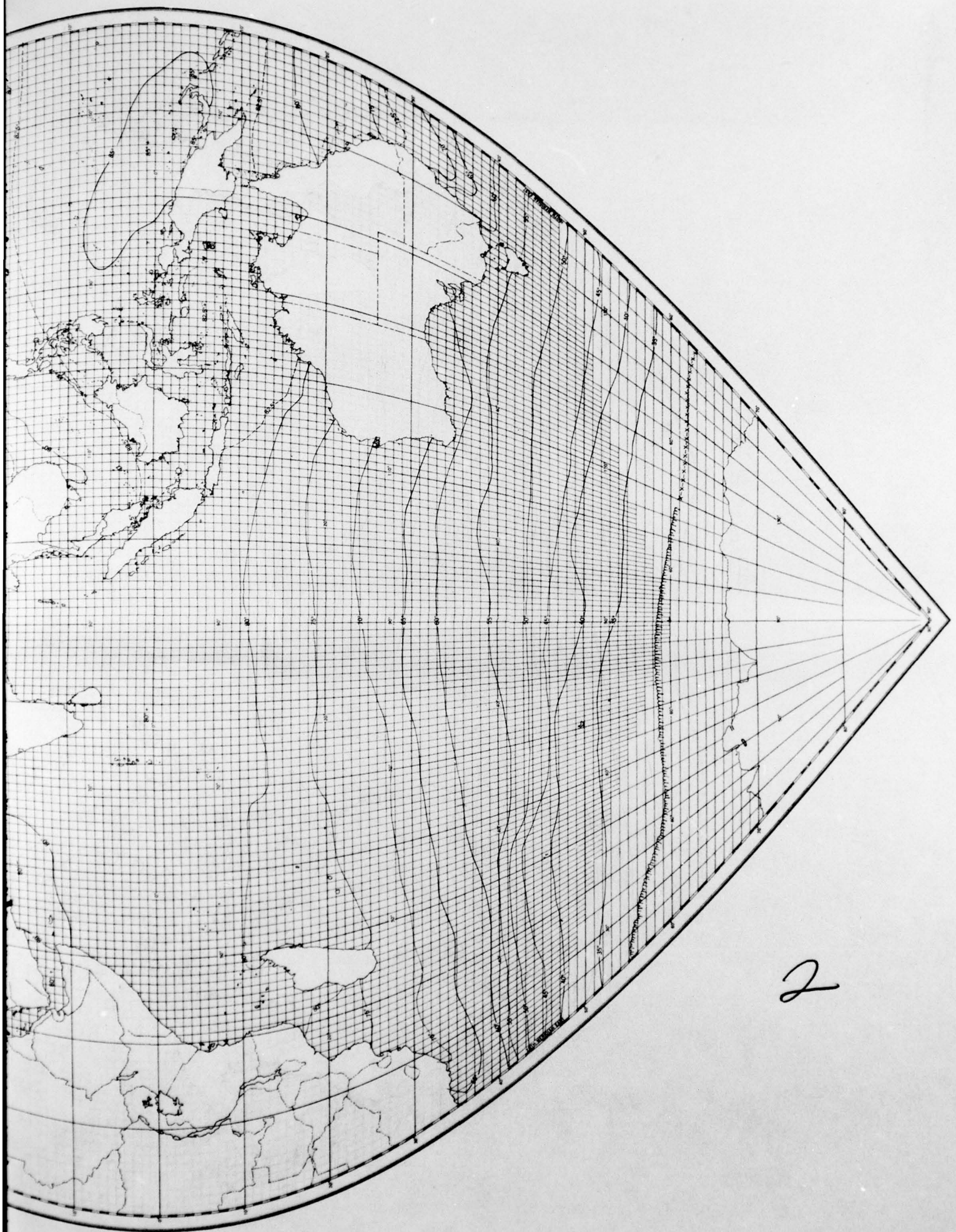
## INDIAN OCEAN NOVEMBER



- LEGEND**
- TEMPERATURES**
- OBSERVED TEMPERATURES
  - - - INTERPOLATED TEMPERATURES
  - ... INTERPOLATED TEMPERATURES
  - ... INTERPOLATED TEMPERATURES
- ICE LIMITS**
- MEAN ICE LIMIT
  - - - MEAN ICE LIMIT
  - ... MEAN ICE LIMIT
  - ... MEAN ICE LIMIT

Compiled by the Bureau of Oceanography, U.S. Navy, from the records of the U.S. Navy Oceanographic Office and other sources.





2





# SEA SURFACE TEMPERATURE CHART

Published by the

U.S. NAVAL OCEANOGRAPHIC OFFICE  
WASHINGTON, D.C.

1943

## INDIAN OCEAN DECEMBER



### LEGEND

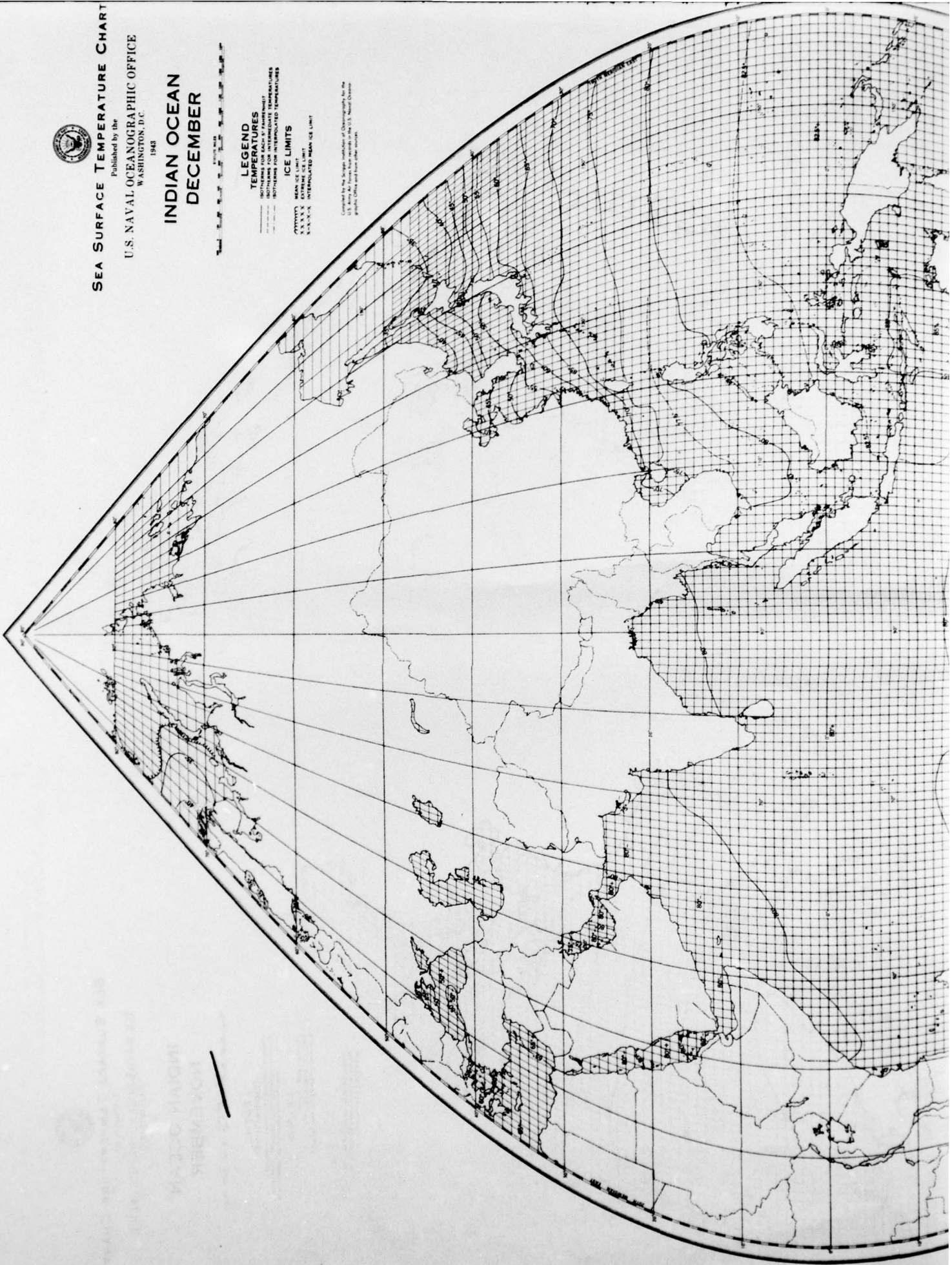
#### TEMPERATURES

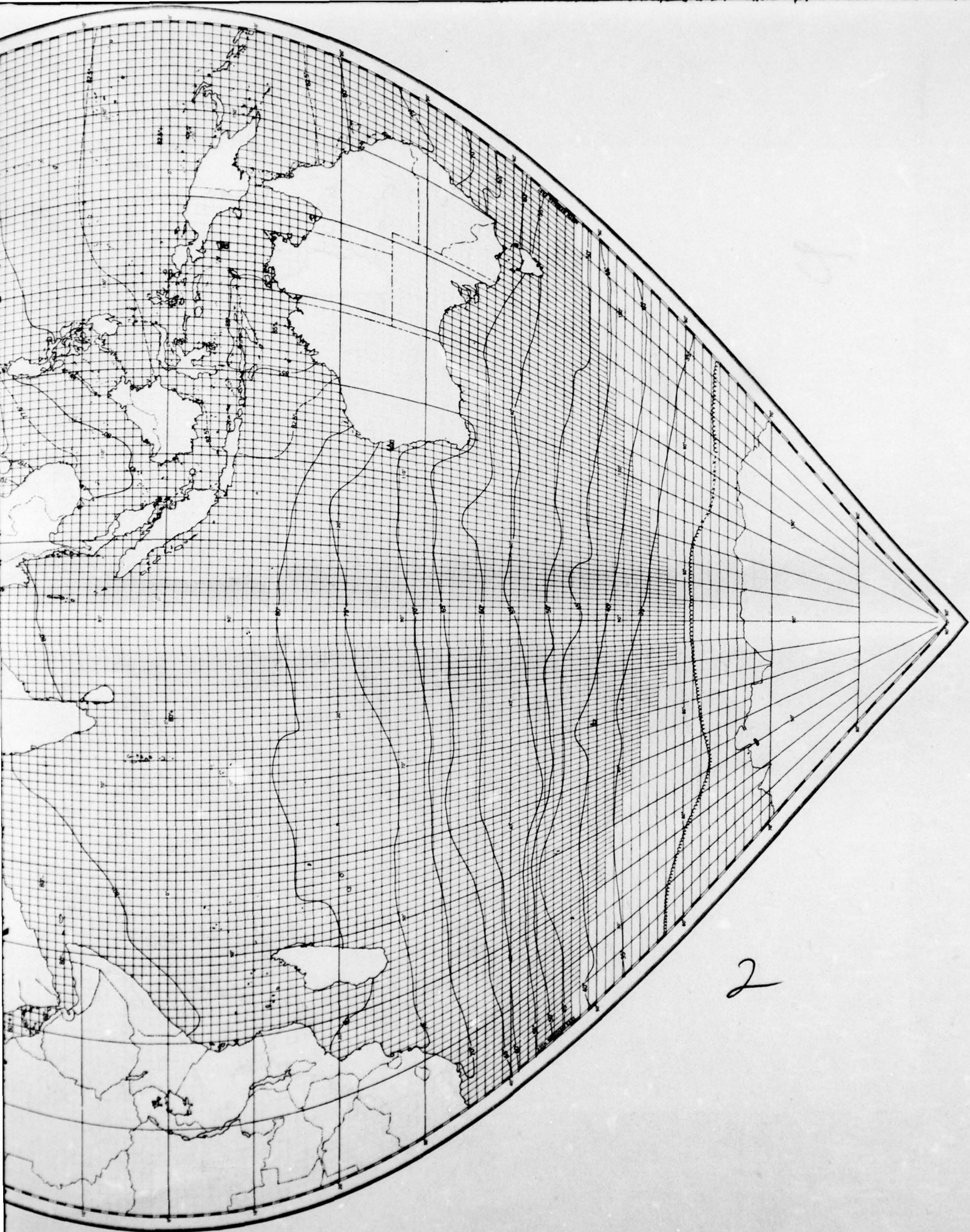
— OBSERVED TEMPERATURES  
--- INTERPOLATED TEMPERATURES

#### ICE LIMITS

— MEAN ICE LIMIT  
--- INTERPOLATED MEAN ICE LIMIT  
--- INTERPOLATED MEAN ICE LIMIT

Compiled by the Hydrographic Department, U.S. Navy  
U.S. Army Air Force from records in the U.S. Naval Oceanographic Office and from other sources.





2